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BUREAU OF RAILWAY ECONOMICS

Established by Railways of the United States
for the Scientific Study of Transportation Problems

FRANK HAIGH DIXON
CHIEF STATISTICIAN

LOGAN G. McPHERSON
DIRECTOR

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List of Publications Pertaining to Government Ownership of Railways

Bulletin No. 62
WASHINGTON, D. C.
1914

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BULLETINS OF THE BUREAU OF RAILWAY ECONOMICS, WASHINGTON, D. C.

1. Summary of Revenues and Expenses of Steam Roads in the United States for July, 1910. (Monthly Report Series, Bulletin No. 1.)
2. Summary of Revenues and Expenses of Steam Roads in the United States for August, 1910. (Monthly Report Series, Bulletin No. 2.)
3. Summary of Revenues and Expenses of Steam Roads in the United States for September, 1910. (Monthly Report Series, Bulletin No. 3.)
4. A Comparative Statement of Physical Valuation and Capitalization.
5. Preliminary Bulletin for November, 1910—Revenues and Expenses.
6. Railway Traffic Statistics, 1900–1909. (Superseded by No. 31.)
7. Summary of Revenues and Expenses of Steam Roads in the United States for October, 1910. (Monthly Report Series, Bulletin No. 4).
8. Summary of Revenues and Expenses of Steam Roads in the United States for November, 1910. (Monthly Report Series, Bulletin No. 5.)
9. Summary of Revenues and Expenses of Steam Roads in the United States for December, 1910. (Monthly Report Series, Bulletin No. 6.)
10. Summary of Revenues and Expenses of Steam Roads in the United States for January, 1911.
11. (Out of Print.)
12. Summary of Revenues and Expenses of Steam Roads in the United States for February, 1911.
13. " " " for March, 1911.
14. " " " for April, 1911.
15. (Out of Print.)
16. Summary of Revenues and Expenses of Steam Roads in the United States for May, 1911.
17. (Out of Print.)
18. (Out of Print.)
19. Summary of Revenues and Expenses of Steam Roads in the United States for June, 1911.
20. " " " for July, 1911.
21. The Cost of Transportation on the Erie Canal and by Rail.
22. Summary of Revenues and Expenses of Steam Roads in the United States for August, 1911.
23. (Out of Print.)
24. Comparative Railway Statistics of the United States, the United Kingdom, France, and Germany.
25. Summary of Revenues and Expenses of Steam Roads in the United States for September, 1911.
26. " " " for October, 1911.
27. " " " for November, 1911.
28. Effect of Recent Wage Advances upon Railway Employees' Compensation during the Year Ending June 30, 1911.
    Variations in the Number of Railway Employees, 1909–1910–1911.
    Relation of the Number of Employees and their Compensation to Traffic and Revenue, 1909–1910–1911.

(Continued to page 3 of cover.)

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List of Publications Pertaining to Government Ownership of Railways

Bureau of railway economics

Bulletin No. 62
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In the preparation of this bibliography every effort has been made to include references to all the available literature on the subject—good, bad, and indifferent—for and against government ownership.

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PREFATORY NOTE

The following libraries are represented in the bibliography of railways maintained by the Bureau of Railway Economics. The books and pamphlets in this list may be found in the libraries respectively indicated by the key letters:

APS	—American Philosophical Society
ASCE	—American Society of Civil Engineers
AmhC	—Amherst College
BA	—Boston Athenæum
BPL	—Boston Public Library
BowC	—Bowdoin College
B	—Bureau of Railway Economics
Clark	—Clark University
ClevePL	—Cleveland Public Library
CU	—Columbia University
CtHS	—Connecticut Historical Society
CtSL	—Connecticut State Library
CornU	—Cornell University
DCL	—Dartmouth College Library
HU	—Harvard University
HDG	—Collection of Professor Henry D. Gardner, Providence
HF&S	—Harvey Fisk & Sons, New York City
Hh	—Private Collection of James Hillhouse, Esq., New Haven
H	—Hopkins Railway Library, Leland Stanford Jr. University
IndSL	—Indiana State Library
IntRC	—International Railway Congress Library, Berne
ICC	—Interstate Commerce Commission
JC	—John Crerar Library
JHU	—Johns Hopkins University
LU	—Lehigh University
LibCo	—Library Company of Philadelphia
LC	—Library of Congress
LSE	—London School of Economics
MeHS	—Maine Historical Society
MeSL	—Maine State Library
MassHS	—Massachusetts Historical Society
MIT	—Massachusetts Institute of Technology
MassRR	—Massachusetts Railroad Commission, now Public Service Commission
MassSL	—Massachusetts State Library
MechL	—Mechanics' Library of Altoona, Pa.

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NHSL —New Hampshire State Library
NJSL —New Jersey State Library
NY —New York Public Library
PrU —Princeton University
Prussia —Bibliothek des Königl. Ministeriums der Öffentlichen Arbeiten, Berlin
Rgy —Ridgeway Library, Philadelphia
StLPL —St. Louis Public Library
SpgPL —Springfield City Library Association, Springfield, Mass.
SU —Syracuse University
TPL —Toronto Public Library
TrentPL —Trenton Public Library
Tufts —Tufts College
UCal —University of California
UC —University of Chicago
UI —University of Illinois
UM —University of Michigan
UMinn —University of Minnesota
UP —University of Pennsylvania
UT —University of Toronto
UW —University of Wisconsin
WRHS —Western Reserve Historical Society
WorcAS —Worcester Antiquarian Society
WorcPL —Worcester Public Library
Y —Yale University

Files of general periodicals, such as the Arena, Atlantic Monthly, Forum, Fortnightly, etc., are to be found in all the larger libraries, as well as in those especially indicated.

Files of the Railway Age Gazette are to be found in most of the public and university libraries. The Archiv für Eisenbahnwesen is to be found in most of the university libraries.

No attempt has been made to include in this list references to the larger subject of the relations of railways to the state, or to books and articles that are merely descriptive of state railroads.

In the preparation of this list the Bureau of Railway Economics has received valuable assistance from the Division of Bibliography of the Library of Congress and from the New York Public Library.

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BULLETINS OF THE BUREAU OF RAILWAY ECONOMICS, WASHINGTON, D. C.

1. Summary of Revenues and Expenses of Steam Roads in the United States for July, 1910. (Monthly Report Series, Bulletin No. 1.)
2. Summary of Revenues and Expenses of Steam Roads in the United States for August, 1910. (Monthly Report Series, Bulletin No. 2.)
3. Summary of Revenues and Expenses of Steam Roads in the United States for September, 1910. (Monthly Report Series, Bulletin No. 3.)
4. A Comparative Statement of Physical Valuation and Capitalization.
5. Preliminary Bulletin for November, 1910—Revenues and Expenses.
6. Railway Traffic Statistics, 1900–1909. (Superseded by No. 31.)
7. Summary of Revenues and Expenses of Steam Roads in the United States for October, 1910. (Monthly Report Series, Bulletin No. 4.)
8. Summary of Revenues and Expenses of Steam Roads in the United States for November, 1910. (Monthly Report Series, Bulletin No. 5.)
9. Summary of Revenues and Expenses of Steam Roads in the United States for December, 1910. (Monthly Report Series, Bulletin No. 6.)
10. Summary of Revenues and Expenses of Steam Roads in the United States for January, 1911.
11. (Out of Print.)
12. Summary of Revenues and Expenses of Steam Roads in the United States for February, 1911.
13. " " " for March, 1911.
14. " " " for April, 1911.
15. (Out of Print.)
16. Summary of Revenues and Expenses of Steam Roads in the United States for May, 1911.
17. (Out of Print.)
18. (Out of Print.)
19. Summary of Revenues and Expenses of Steam Roads in the United States for June, 1911.
20. " " " for July, 1911.
21. The Cost of Transportation on the Erie Canal and by Rail.
22. Summary of Revenues and Expenses of Steam Roads in the United States for August, 1911.
23. (Out of Print.)
24. Comparative Railway Statistics of the United States, the United Kingdom, France, and Germany.
25. Summary of Revenues and Expenses of Steam Roads in the United States for September, 1911.
26. " " " for October, 1911.
27. " " " for November, 1911.
28. Effect of Recent Wage Advances upon Railway Employees' Compensation during the Year Ending June 30, 1911.
    Variations in the Number of Railway Employees, 1909–1910–1911.
    Relation of the Number of Employees and their Compensation to Traffic and Revenue, 1909–1910–1911.

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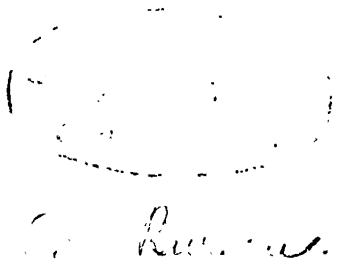

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The following libraries are represented in the bibliography of railways maintained by the Bureau of Railway Economics. The books and pamphlets in this list may be found in the libraries respectively indicated by the key letters:

APS	—American Philosophical Society
ASCE	—American Society of Civil Engineers
AmhC	—Amherst College
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BA	—Boston Athenæum
BPL	—Boston Public Library
BostU	—Boston University
BowC	—Bowdoin College
B	—Bureau of Railway Economics
Clark	—Clark University
ClevePL	—Cleveland Public Library
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CtHS	—Connecticut Historical Society
CtSL	—Connecticut State Library
CornU	—Cornell University
DCL	—Dartmouth College Library
FJL	—F. J. Lisman & Co., New York City
Gros	—Grosvenor Library, Buffalo
HU	—Harvard University
HDG	—Collection of Professor Henry D. Gardner, Providence
HF&S	—Harvey Fisk & Sons, New York City
Hh	—Private Collection of James Hillhouse, Esq., New Haven*
H	—Hopkins Railway Library, Leland Stanford Jr. University
IndSL	—Indiana State Library
IntRC	—International Railway Congress Library, Berne
ICC	—Interstate Commerce Commission
JC	—John Crerar Library
JHU	—Johns Hopkins University
KansHS	—Kansas Historical Society, Topeka
LU	—Lehigh University
LibCo	—Library Company of Philadelphia
LC	—Library of Congress
LSE	—London School of Economics, University of London
McG	—McGill University
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MassHS —Massachusetts Historical Society
MIT —Massachusetts Institute of Technology
MassRR —Massachusetts Railroad Commission, now Public Service Commission
MassSL —Massachusetts State Library
MechL —Mechanics' Library of Altoona, Pa.
NHSL —New Hampshire State Library
NJSL —New Jersey State Library
NY —New York Public Library
PaHS —Pennsylvania Historical Society, Philadelphia
PrU —Princeton University
Prussia —Bibliothek des Königl. Ministeriums der Öffentlichen Arbeiten, Berlin
Rds —Reynolds Library, Rochester
Rgy —Ridgeway Library, Philadelphia
StLPL —St. Louis Public Library
SpgPL —Springfield City Library Association, Springfield, Mass.
SU —Syracuse University
TPL —Toronto Public Library
TrentPL —Trenton Public Library
Tufts —Tufts College
UCal —University of California
UC —University of Chicago
UI —University of Illinois
UM —University of Michigan
UMinn —University of Minnesota
UP —University of Pennsylvania
UT —University of Toronto
UW —University of Wisconsin
WRHS —Western Reserve Historical Society
WorcAS —Worcester Antiquarian Society
WorcPL —Worcester Public Library
Y —Yale University

Files of general periodicals, such as the Arena, Atlantic Monthly, Forum, Fortnightly, etc., are to be found in all the larger libraries, as well as in those especially indicated.

Files of the Railway Age Gazette are to be found in most of the public and university libraries. The Archiv für Eisenbahnwesen is to be found in most of the university libraries.

No attempt has been made to include in this list references to the larger subject of the relations of railways to the state, or to books and articles that are merely descriptive of state railroads.

In the preparation of this list the Bureau of Railway Economics has received valuable assistance from the Division of Bibliography of the Library of Congress and from the New York Public Library.

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GENERAL

Acworth, William M. Railways under government control.
(Forum, v. 11: 79–90; March 1891) B, LC, NY.

Abstract in Railway review, v. 31: 147; Mar. 7, 1891.

Acworth, William M. The relation of railroads to the state; an address . . . delivered as president of the Section of economic science and statistics, at the annual meeting of the British association for the advancement of science, at Dublin, Ireland, September 2, 1908. Philadelphia, Press of Allen, Lane & Scott, 1908. 14 p. 8°. B, BPL, CtSL, H, HU, IndSL, ICC, JC, LC, MIT, NHSL, NY, PrU, UCal, UI, UP, UT, UW, Y.

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Acworth, William M., *and* Cook, William W. Acworth and Cook, on a government holding company.
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Adams, Charles Francis, Jr. The state and the railroads.
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Allen, Walter S. Some problems of public ownership.
(North American review, v. 197: 8–21; Jan. 1913) B, HU, LC, NY.

Allix, Georges. Régies nationales et municipales.
(Journal des transports, 37th year; 37–39; Jan. 24, 1914) B, LC.

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(Moody's magazine, v. 7, 8, 9, Apr. 1909–Apr. 1910) B, ICC, JC, LC, NY.

A monthly series of 13 articles covering the more important railway systems of Europe, with especial reference to the question of government versus private ownership.

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(Forum, v. 10: 174–84; October 1890) B, LC, LSE, NY.

Reasons for early nationalization of railways in the United States: p. 179.

Bellet, Daniel. Chronique des transports.

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Established by Railways of the United States
for the Scientific Study of Transportation Problems

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Statistics of Railways 1900-1912 United States

Bulletin No. 66

WASHINGTON, D. C.

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1. Summary of Revenues and Expenses of Steam Roads in the United States for July, 1910. (Monthly Report Series, Bulletin No. 1.)
2. Summary of Revenues and Expenses of Steam Roads in the United States for August, 1910. (Monthly Report Series, Bulletin No. 2.)
3. Summary of Revenues and Expenses of Steam Roads in the United States for September, 1910. (Monthly Report Series, Bulletin No. 3.)
4. A Comparative Statement of Physical Valuation and Capitalization.
5. Preliminary Bulletin for November, 1910—Revenues and Expenses.
6. Railway Traffic Statistics, 1900–1909. (Superseded by No. 31.)
7. Summary of Revenues and Expenses of Steam Roads in the United States for October, 1910. (Monthly Report Series, Bulletin No. 4.)
8. Summary of Revenues and Expenses of Steam Roads in the United States for November, 1910. (Monthly Report Series, Bulletin No. 5.)
9. Summary of Revenues and Expenses of Steam Roads in the United States for December, 1910. (Monthly Report Series, Bulletin No. 6.)
10. Summary of Revenues and Expenses of Steam Roads in the United States for January, 1911.
11. (Out of Print.)
12. Summary of Revenues and Expenses of Steam Roads in the United States for February, 1911.
13. " " " for March, 1911.
14. " " " for April, 1911.
15. (Out of Print.)
16. Summary of Revenues and Expenses of Steam Roads in the United States for May, 1911.
17. (Out of Print.)
18. (Out of Print.)
19. Summary of Revenues and Expenses of Steam Roads in the United States for June, 1911.
20. " " " for July, 1911.
21. The Cost of Transportation on the Erie Canal and by Rail.
22. Summary of Revenues and Expenses of Steam Roads in the United States for August, 1911.
23. (Out of Print.)
24. Comparative Railway Statistics of the United States, the United Kingdom, France, and Germany.
25. Summary of Revenues and Expenses of Steam Roads in the United States for September, 1911.
26. " " " for October, 1911.
27. " " " for November, 1911.
28. Effect of Recent Wage Advances upon Railway Employees' Compensation during the Year Ending June 30, 1911.
    Variations in the Number of Railway Employees, 1909–1910–1911.
    Relation of the Number of Employees and their Compensation to Traffic and Revenue, 1909–1910–1911.
29. Summary of Revenues and Expenses of Steam Roads in the United States for December, 1911.
30. " " " for January, 1912.

(Continued to page 3 of cover.)

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Statistics of Railways

1900-1912

United States

Washington, D. C.
September, 1914.

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EXPLANATORY NOTE.

The purpose of this bulletin is to present for convenient reference aspects of railway operation in the United States as shown by official statistics. The railway tabulations are based upon official data published by the Interstate Commerce Commission for each fiscal year from 1900 to 1912, the latest year for which such official data is available. Tabulations concerning population and area are based upon the reports of the Bureau of the Census.

Prior to 1911 the Interstate Commerce Commission presented the statistics of railways by ten territorial groups. Beginning with 1911 it has presented the statistics in three districts representing the three important traffic areas. The map on the following page indicates the ten groups previously used and the three districts that have superseded them.

The statistics given in this bulletin respectively for the three districts for the years prior to 1911 are combinations of the statistics originally published by groups. The boundaries of the present districts coincide exactly with boundaries of the previous groups with one exception, namely: the area between the Illinois-Indiana state line and a line drawn from Chicago through Peoria to St. Louis was formerly included in Group VI, but is now in the Eastern District, which also comprises what were Groups I, II and III. The Western District embraces what were Groups VI, VII, VIII, IX and X, with the exception of that portion of Illinois referred to as now comprised in the Eastern District. Therefore in the tabulations in this bulletin for the years prior to 1911 statistics applying to this portion of Illinois are included in those for the Western District, while in the tabulations for the years 1911 and 1912 statistics for this area are included with those for the Eastern District.

During the years covered by the tabulations the Interstate Commerce Commission has prescribed certain changes in the accounting system of the railways and in the methods of making statistical reports. These changes do not seriously impair the comparability of the statistics nor disturb their general trend.

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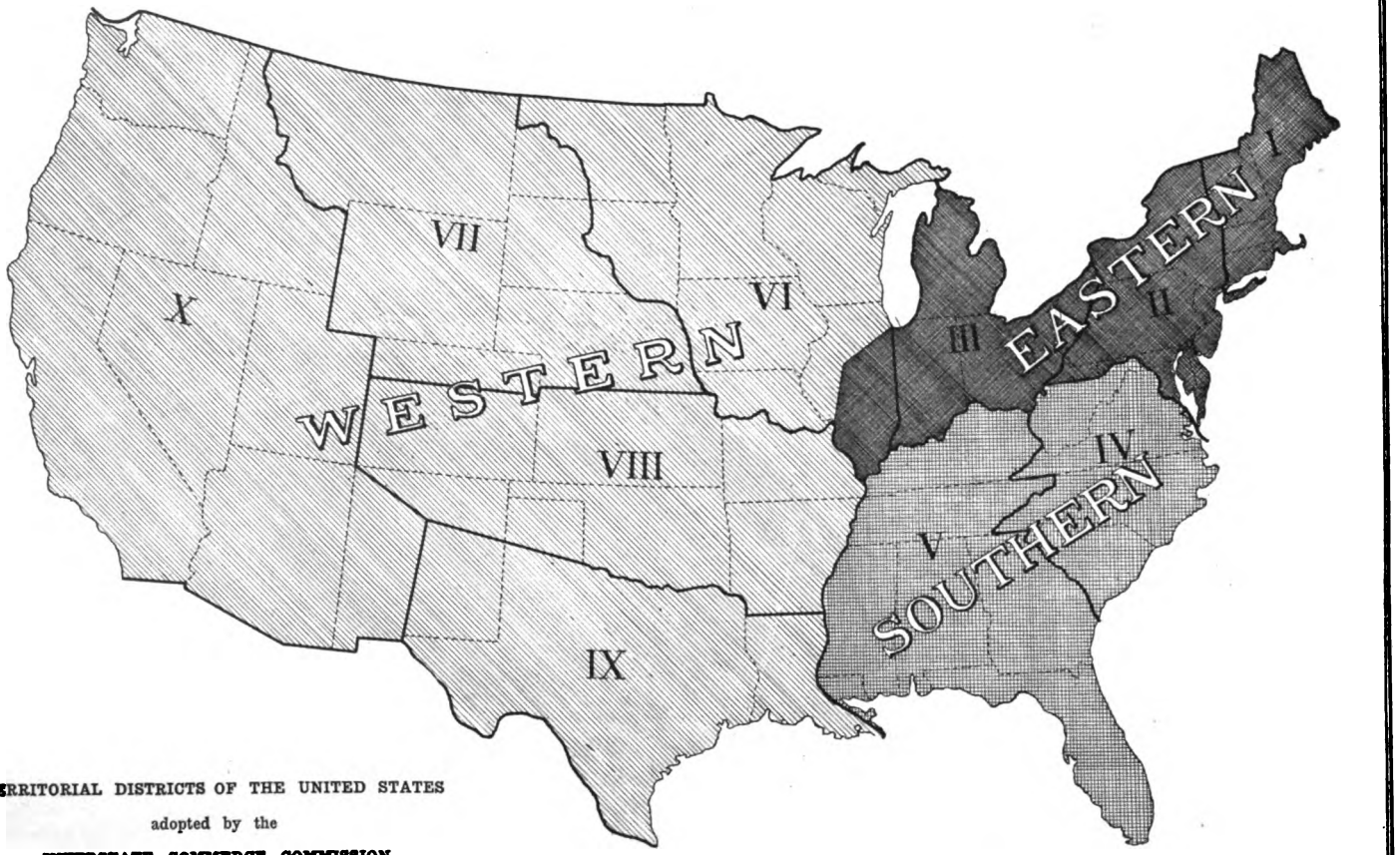

TERRITORIAL DISTRICTS OF THE UNITED STATES
adopted by the
INTERSTATE COMMERCE COMMISSION

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I. POPULATION AND AREA.

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TABLE 1.

POPULATION.

Year.	United States.		Eastern District.		Southern District.		Western District.	
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
1900...	75,994,575	100	31,801,239	41.8	16,543,881	21.8	27,649,455	36.4
1901...	77,592,344	100	32,419,174	41.8	16,790,068	21.6	28,383,102	36.6
1902...	79,190,113	100	33,037,109	41.7	17,036,255	21.5	29,116,749	36.8
1903...	80,787,882	100	33,655,045	41.7	17,282,442	21.4	29,850,395	36.9
1904...	82,385,651	100	34,272,980	41.6	17,528,629	21.3	30,584,042	37.1
1905...	83,983,420	100	34,890,915	41.5	17,774,816	21.2	31,317,689	37.3
1906...	85,581,190	100	35,508,850	41.5	18,021,004	21.1	32,051,336	37.4
1907...	87,178,959	100	36,126,785	41.4	18,267,191	21.0	32,784,983	37.6
1908...	88,776,728	100	36,744,721	41.4	18,513,378	20.8	33,518,629	37.8
1909...	90,374,497	100	37,362,656	41.3	18,759,565	20.8	34,252,276	37.9
1910...	91,972,266	100	37,980,591	41.3	19,005,752	20.7	34,985,923	38.0
1911...	93,927,342	100	41,886,575	44.6	19,306,531	20.6	32,734,236	34.8
1912...	95,545,336	100	42,560,622	44.5	19,555,467	20.5	33,429,247	35.0

TABLE 2.

AREA.

(Square miles.)

Year.	United States.		Eastern District.		Southern District.		Western District.	
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
1900 to 1910.	2,973,890	100	295,085	9.9	439,341	14.8	2,239,464	75.3
1911 and 1912.	2,973,890	100	328,361	11.0	439,341	14.8	2,206,188	74.2

TABLE 3.

DENSITY OF POPULATION.

(Number per square mile.)

Year.	United States.	Eastern District.	Southern District.	Western District.
1900.....	25.6	107.8	37.7	12.3
1901.....	26.1	109.9	38.2	12.7
1902.....	26.6	112.0	38.8	13.0
1903.....	27.2	114.1	39.3	13.3
1904.....	27.7	116.1	39.9	13.7
1905.....	28.2	118.2	40.5	14.0
1906.....	28.8	120.3	41.0	14.3
1907.....	29.3	122.4	41.6	14.6
1908.....	29.9	124.5	42.1	15.0
1909.....	30.4	126.6	42.7	15.3
1910.....	30.9	128.7	43.3	15.6
1911.....	31.6	127.6	43.9	14.8
1912.....	32.1	129.6	44.5	15.2

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TABLE 4.

POPULATION PER MILE OF LINE.

Year.	United States.	Eastern District.	Southern District.	Western District.
1900	394.7	594.2	503.6	260.4
1901	396.8	602.9	499.4	262.4
1902	395.7	609.1	492.4	261.6
1903	393.5	611.4	490.1	259.6
1904	388.2	611.5	486.4	254.5
1905	387.1	616.6	479.0	254.0
1906	384.9	617.4	471.2	253.2
1907	383.3	622.2	467.6	251.6
1908	385.2	636.2	462.0	252.7
1909	383.9	645.0	454.5	251.5
1910	381.9	653.6	453.1	248.5
1911	381.4	654.1	409.4	242.4
1912	382.4	662.1	406.3	243.2

TABLE 5.

POPULATION PER MILE OF MAIN TRACK.

Year.	United States.	Eastern District.	Southern District.	Western District.
1900	367.8	492.8	499.6	253.7
1901	368.7	497.0	495.0	255.0
1902	366.7	499.4	486.7	253.6
1903	363.5	497.3	482.7	251.3
1904	357.3	493.1	475.9	246.2
1905	354.6	492.3	466.8	244.9
1906	351.7	491.0	458.1	243.4
1907	348.4	489.6	452.2	241.0
1908	349.2	496.1	444.8	242.0
1909	347.6	501.1	436.9	240.4
1910	345.5	505.5	435.0	237.4
1911	343.0	506.8	388.2	231.4
1912	342.2	509.1	383.4	231.2

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TABLE 6.

SQUARE MILES OF AREA PER MILE OF LINE.

Year.	United States.	Eastern District.	Southern District.	Western District.
1900	15.44	5.51	13.37	21.09
1901	15.21	5.49	13.07	20.70
1902	14.86	5.44	12.70	20.12
1903	14.48	5.36	12.46	19.47
1904	14.01	5.27	12.19	18.64
1905	13.71	5.22	11.84	18.16
1906	13.38	5.13	11.49	17.69
1907	13.07	5.08	11.25	17.18
1908	12.90	5.11	10.96	16.88
1909	12.63	5.09	10.64	16.44
1910	12.35	5.08	10.47	15.91
1911	12.08	5.13	9.32	16.34
1912	11.90	5.11	9.13	16.05

TABLE 7.

MILES OF LINE PER 100 SQUARE MILES OF AREA.

Year.	United States.	Eastern District.	Southern District.	Western District.
1900	6.47	18.14	7.48	4.74
1901	6.58	18.22	7.65	4.83
1902	6.73	18.38	7.87	4.97
1903	6.90	18.65	8.03	5.14
1904	7.14	18.99	8.20	5.37
1905	7.30	19.18	8.45	5.51
1906	7.48	19.49	8.70	5.65
1907	7.65	19.68	8.89	5.82
1908	7.75	19.57	9.12	5.92
1909	7.92	19.63	9.39	6.08
1910	8.10	19.69	9.55	6.29
1911	8.28	19.50	10.73	6.12
1912	8.40	19.58	10.96	6.23

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II. RAILWAY MILEAGE.

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TABLE 8.

MILES OF LINE OPERATED—SINGLE TRACK.*

Year.	United States.		Eastern District.		Southern District.		Western District.	
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
1900...	192,556	100	53,516	27.8	32,852	17.1	106,188	55.1
1901...	195,562	100	53,775	27.5	33,621	17.2	108,166	55.3
1902...	200,155	100	54,237	27.1	34,596	17.3	111,322	55.6
1903...	205,314	100	55,042	26.8	35,266	17.2	115,006	56.0
1904...	212,243	100	56,043	26.4	36,039	17.0	120,161	56.6
1905...	216,974	100	56,583	26.1	37,105	17.1	123,286	56.8
1906...	222,340	100	57,518	25.9	38,241	17.2	126,581	56.9
1907...	227,455	100	58,062	25.5	39,068	17.2	130,325	57.3
1908...	230,494	100	57,754	25.1	40,072	17.4	132,668	57.5
1909...	235,402	100	57,923	24.6	41,273	17.5	136,206	57.9
1910...	240,831	100	58,108	24.1	41,942	17.4	140,781	58.5
1911...	246,238	100	64,038	26.0	47,153	19.2	135,047	54.8
1912...	249,852	100	64,284	25.7	48,133	19.3	137,435	55.0

* Includes a small amount of mileage in Canada.

TABLE 9.

MILES OF TRACK OPERATED—MAIN TRACK.*

Year.	United States.		Eastern District.		Southern District.		Western District.	
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
1900...	206,631	100	64,537	31.2	33,117	16.0	108,977	52.8
1901...	210,437	100	65,226	31.0	33,922	16.1	111,289	52.9
1902...	215,974	100	66,151	30.6	35,006	16.2	114,817	53.2
1903...	222,261	100	67,676	30.5	35,806	16.1	118,779	53.4
1904...	230,581	100	69,499	30.1	36,835	16.0	124,247	53.9
1905...	236,855	100	70,880	29.9	38,080	16.1	127,895	54.0
1906...	243,322	100	72,315	29.7	39,337	16.2	131,670	54.1
1907...	250,226	100	73,783	29.5	40,395	16.1	136,048	54.4
1908...	254,193	100	74,065	29.1	41,621	16.4	138,507	54.5
1909...	259,975	100	74,564	28.7	42,935	16.5	142,476	54.8
1910...	266,185	100	75,129	28.2	43,694	16.4	147,362	55.4
1911...	273,851	100	82,655	30.2	49,733	18.2	141,463	51.6
1912...	279,219	100	83,593	29.9	51,008	18.3	144,618	51.8

* Includes a small amount of mileage in Canada.

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TABLE 10.

MILES OF TRACK OPERATED—YARD TRACK AND SIDINGS.*

Year.	United States.		Eastern District.		Southern District.		Western District.	
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
1900...	52,153	100	23,363	44.8	6,329	12.1	22,461	43.1
1901...	54,915	100	24,138	43.9	6,689	12.2	24,088	43.9
1902...	58,221	100	25,239	43.3	7,214	12.4	25,768	44.3
1903...	61,560	100	26,447	43.0	7,524	12.2	27,589	44.8
1904...	66,492	100	28,045	42.2	8,133	12.2	30,314	45.6
1905...	69,942	100	29,439	42.1	8,797	12.6	31,706	45.3
1906...	73,761	100	31,019	42.1	9,293	12.6	33,449	45.3
1907...	77,749	100	32,241	41.5	10,137	13.0	35,371	45.5
1908...	79,453	100	32,619	41.0	10,856	13.7	35,978	45.3
1909...	82,377	100	33,209	40.3	11,247	13.7	37,921	46.0
1910...	85,582	100	34,009	39.7	11,731	13.7	39,842	46.6
1911...	88,974	100	36,894	41.5	13,925	15.6	38,155	42.9
1912...	92,019	100	37,870	41.2	14,585	15.8	39,564	43.0

* Includes a small amount of mileage in Canada.

TABLE 11.

MILES OF TRACK OPERATED—ALL TRACKS.*

Year.	United States.		Eastern District.		Southern District.		Western District.	
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
1900...	258,784	100	87,900	34.0	39,446	15.2	131,438	50.8
1901...	265,352	100	89,364	33.7	40,611	15.3	135,377	51.0
1902...	274,195	100	91,390	33.3	42,220	15.4	140,585	51.3
1903...	283,821	100	94,123	33.1	43,330	15.3	146,368	51.6
1904...	297,073	100	97,544	32.8	44,968	15.2	154,561	52.0
1905...	306,797	100	100,319	32.7	46,877	15.3	159,601	52.0
1906...	317,083	100	103,334	32.6	48,630	15.3	165,119	52.1
1907...	327,975	100	106,024	32.3	50,532	15.4	171,419	52.3
1908...	333,646	100	106,684	32.0	52,477	15.7	174,485	52.3
1909...	342,352	100	107,773	31.5	54,182	15.8	180,397	52.7
1910...	351,767	100	109,138	31.0	55,425	15.8	187,204	53.2
1911...	362,825	100	119,549	33.0	63,658	17.5	179,618	49.5
1912...	371,238	100	121,463	32.7	65,593	17.7	184,182	49.6

* Includes a small amount of mileage in Canada.

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III. CAPITAL SECURITIES AND DIVIDENDS.

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TABLE 12.

TOTAL CAPITAL SECURITIES.

Year.	United States.		Eastern District.		Southern District.		Western District.	
	Amount.	Increase over 1900.	Amount.	Increase over 1900.	Amount.	Increase over 1900.	Amount.	Increase over 1900.
		(per cent.)		(per cent.)		(per cent.)		(per cent.)
1900.....	$11,491,034,960	....	$4,301,200,939	....	$1,535,545,013	....	$5,654,289,008	....
1901.....	11,688,147,091	1.7	4,401,409,390	2.3	1,452,205,892	*d* 5.4	5,834,531,809	3.2
1902.....	12,134,182,964	5.6	4,617,683,320	7.4	1,480,912,447	*d* 3.6	6,035,587,197	6.7
1903.....	12,599,990,258	9.7	4,816,629,573	12.0	1,548,100,706	0.8	6,235,259,979	10.3
1904.....	13,213,124,679	15.0	5,096,428,336	18.5	1,618,884,950	5.4	6,497,811,393	14.9
1905.....	13,805,258,121	20.1	5,356,972,099	24.5	1,677,073,671	9.2	6,771,212,351	19.8
1906.....	14,570,421,478	26.8	5,765,714,732	34.0	1,782,643,689	16.1	7,022,063,057	24.2
1907.....	16,082,146,683	40.0	6,347,229,509	47.6	1,995,166,177	29.9	7,739,750,997	36.9
1908.....	16,767,544,827	45.9	6,442,119,486	49.8	2,223,539,298	44.8	8,101,886,043	43.3
1909.....	17,487,868,935	52.2	6,501,431,103	51.2	2,265,101,150	47.5	8,721,336,682	54.2
1910.....	18,417,132,238	60.3	6,757,051,293	57.1	2,307,096,516	50.2	9,352,984,429	65.4
1911.....	19,208,935,081	67.2	7,261,154,383	68.8	2,780,400,185	81.1	9,167,380,513	62.1
1912.....	19,752,536,264	71.9	7,402,003,816	72.1	2,841,606,369	85.1	9,508,926,079	68.2

d Decrease.

TABLE 13.

CAPITAL STOCK.

Year.	United States.		Eastern District.		Southern District.		Western District.	
	Amount.	Increase over 1900.	Amount.	Increase over 1900.	Amount.	Increase over 1900.	Amount.	Increase over 1900.
		(per cent.)		(per cent.)		(per cent.)		(per cent.)
1900.....	$5,845,579,593	....	$2,192,218,187	....	$740,858,515	....	$2,912,502,891	....
1901.....	5,806,566,204	*d* 0.7	2,203,028,432	0.5	670,267,735	*d* 9.5	2,933,270,037	0.7
1902.....	6,024,201,295	3.1	2,331,533,286	6.4	683,907,978	*d* 7.7	3,008,760,031	3.3
1903.....	6,155,559,032	5.3	2,428,832,520	10.8	659,360,609	*d* 11.0	3,067,365,903	5.3
1904.....	6,339,899,329	8.5	2,539,298,624	15.8	667,215,909	*d* 9.9	3,133,384,796	7.6
1905.....	6,554,557,051	12.1	2,595,937,043	18.4	679,760,740	*d* 8.2	3,278,859,268	12.6
1906.....	6,803,760,093	16.4	2,694,844,538	22.9	696,487,184	*d* 6.0	3,412,428,371	17.2
1907.....	7,356,861,691	25.9	2,870,527,181	30.9	769,294,124	3.8	3,717,040,386	27.6
1908.....	7,373,212,323	26.1	2,828,679,857	29.0	819,117,465	10.6	3,725,415,001	27.9
1909.....	7,686,278,545	31.5	2,843,385,441	29.7	836,104,769	12.9	4,006,788,335	37.6
1910.....	8,113,657,380	38.8	3,041,886,610	38.8	839,877,561	13.4	4,231,893,209	45.3
1911.....	8,470,717,611	44.9	3,352,507,532	52.9	1,049,587,743	41.7	4,068,622,336	39.7
1912.....	8,622,400,821	47.5	3,404,957,289	55.3	1,095,941,097	47.9	4,121,502,435	41.5

d Decrease.

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TABLE 14.

FUNDED DEBT.

Year.	United States.		Eastern District.		Southern District.		Western District.	
	Amount.	Increase over 1900.	Amount.	Increase over 1900.	Amount.	Increase over 1900.	Amount.	Increase over 1900.
		(per cent.)		(per cent.)		(per cent.)		(per cent.)
1900	$5,645,455,367	....	$2,108,982,752	....	$794,686,498	....	$2,741,786,117	....
1901	5,881,580,887	4.2	2,198,380,958	4.2	781,938,157	*d* 1.6	2,901,261,772	5.8
1902	6,109,981,669	8.2	2,286,150,034	8.4	797,004,469	0.3	3,026,827,166	10.4
1903	6,444,431,226	14.2	2,387,797,053	13.2	888,740,097	11.8	3,167,894,076	15.5
1904	6,873,225,350	21.7	2,557,129,712	21.2	951,669,041	19.8	3,364,426,597	22.7
1905	7,250,701,070	28.4	2,761,035,056	30.9	997,312,931	25.5	3,492,353,083	27.4
1906	7,766,661,385	37.6	3,070,870,194	45.6	1,086,156,505	36.7	3,609,634,686	31.7
1907	8,725,284,992	54.6	3,476,702,328	64.9	1,225,872,053	54.3	4,022,710,611	46.7
1908	9,394,332,504	66.4	3,613,439,629	71.3	1,404,421,833	76.7	4,376,471,042	59.6
1909	9,801,590,390	73.6	3,658,045,662	73.5	1,428,996,381	79.8	4,714,548,347	72.0
1910	10,303,474,858	82.5	3,715,164,683	76.2	1,467,218,955	84.6	5,121,091,220	86.8
1911	10,738,217,470	90.2	3,908,646,851	85.3	1,730,812,442	117.8	5,098,758,177	86.0
1912	11,130,135,443	97.2	3,997,046,527	89.5	1,745,665,272	119.7	5,387,423,644	96.5

d Decrease.

TABLE 15.

CAPITAL SECURITIES OUTSTANDING IN THE HANDS OF THE PUBLIC—UNITED STATES.

Year.	Amount.	Per mile of line.
1908	$12,833,591,510	$57,201
1909	13,711,867,733	59,259
1910	14,338,575,940	62,657
1911	15,008,707,570	63,944
1912	15,087,600,650	63,535

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TABLE 16.

DIVIDENDS ON STOCK—UNITED STATES.

Year.	Amount of stock paying dividends.	Per cent of stock paying dividends.	Average rate on dividend-paying stock.	Average rate on all stock.
1900	$2,668,969,895	45.66	5.23	2.39
1901	2,977,575,179	51.27	5.26	2.70
1902	3,337,644,681	55.40	5.55	3.08
1903	3,450,737,869	56.06	5.70	3.20
1904	3,643,427,319	57.47	6.09	3.50
1905	4,119,086,714	62.84	5.78	3.63
1906	4,526,958,760	66.54	6.03	4.01
1907	4,948,756,203	67.27	6.23	4.19
1908	4,843,370,740	65.69	8.07	5.30
1909	4,920,174,118	64.01	6.53	4.18
1910	5,412,578,457	66.71	7.50	5.00
1911	5,730,250,326	67.65	8.03	5.43
1912	5,581,289,249	64.73	7.17	4.64

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IV. REVENUES, EXPENSES AND TAXES.

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TABLE 17.

TOTAL OPERATING REVENUES.

Year.	United States.		Eastern District.		Southern District.		Western District.	
	Amount.	Per cent.	Amount.	Per cent.	Amount.	Per cent.	Amount.	Per cent.
1900	$1,487,044,814	100	$677,892,142	45.6	$174,052,478	11.7	$635,100,194	42.7
1901	1,588,526,037	100	709,990,356	44.7	188,924,823	11.9	689,610,858	43.4
1902	1,726,380,267	100	763,029,037	44.2	205,262,006	11.9	758,089,224	43.9
1903	1,900,846,907	100	847,313,435	44.6	230,788,942	12.1	822,744,530	43.3
1904	1,975,174,091	100	873,678,276	44.2	244,527,877	12.4	856,967,938	43.4
1905	2,082,482,406	100	915,240,636	44.0	260,964,909	12.5	906,276,861	43.5
1906	2,325,765,167	100	1,013,949,012	43.6	292,146,076	12.6	1,019,670,079	43.8
1907	2,589,105,578	100	1,107,437,169	42.8	319,545,986	12.3	1,162,122,423	44.9
1908	2,394,780,410	100	1,015,910,479	42.4	299,365,914	12.5	1,079,504,017	45.1
1909	2,419,299,638	100	998,652,453	41.3	306,404,782	12.7	1,114,242,403	46.0
1910	2,752,634,153	100	1,140,618,432	41.4	348,483,869	12.7	1,263,531,852	45.9
1911	2,789,761,669	100	1,212,471,633	43.5	421,305,872	15.1	1,155,984,164	41.4
1912	2,842,695,382	100	1,248,099,590	43.9	439,059,786	15.4	1,155,536,006	40.7

TABLE 18.

TOTAL OPERATING EXPENSES.

Year.	United States.		Eastern District.		Southern District.		Western District.	
	Amount.	Per cent.	Amount.	Per cent.	Amount.	Per cent.	Amount.	Per cent.
1900	$961,428,511	100	$452,197,832	47.0	$115,239,102	12.0	$393,991,577	41.0
1901	1,030,397,270	100	476,433,048	46.2	125,122,934	12.2	428,841,288	41.6
1902	1,116,248,747	100	513,700,642	46.0	135,632,391	12.2	466,915,714	41.8
1903	1,257,538,852	100	583,653,693	46.4	156,044,625	12.4	517,840,534	41.2
1904	1,338,896,253	100	615,980,209	46.0	167,112,419	12.5	555,803,625	41.5
1905	1,390,602,152	100	635,054,801	45.7	177,907,098	12.8	577,640,253	41.5
1906	1,536,877,271	100	691,445,885	45.0	203,349,785	13.2	642,081,601	41.8
1907	1,748,515,814	100	769,661,507	44.0	237,065,888	13.6	741,788,419	42.4
1908	1,670,396,803	100	720,605,479	43.1	221,552,450	13.3	728,238,874	43.6
1909	1,599,903,524	100	675,383,097	42.2	207,714,327	13.0	716,806,100	44.8
1910	1,824,201,156	100	761,423,244	41.7	231,222,204	12.7	831,555,708	45.6
1911	1,915,054,005	100	854,017,274	44.6	288,575,801	15.1	772,460,930	40.3
1912	1,972,415,776	100	878,803,260	44.6	312,212,958	15.8	781,399,558	39.6

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TABLE 19. **NET OPERATING REVENUE.**

Year.	United States.		Eastern District.		Southern District.		Western District.	
	Amount.	Per cent.	Amount.	Per cent.	Amount.	Per cent.	Amount.	Per cent.
1900.	$525,616,303	100	$225,694,310	42.9	$58,813,376	11.2	$241,108,617	45.9
1901.	558,128,767	100	233,557,308	41.9	63,801,889	11.4	260,769,570	46.7
1902.	610,131,520	100	249,328,395	40.9	69,629,615	11.4	291,173,510	47.7
1903.	643,308,055	100	263,659,742	41.0	74,744,317	11.6	304,903,996	47.4
1904.	636,277,838	100	257,698,067	40.5	77,415,458	12.2	301,164,313	47.3
1905.	691,880,254	100	280,185,835	40.5	83,057,811	12.0	328,636,608	47.5
1906.	788,887,896	100	322,503,127	40.9	88,796,291	11.2	377,588,478	47.9
1907.	840,589,764	100	337,775,662	40.2	82,480,098	9.8	420,334,004	50.0
1908.	724,383,607	100	295,305,000	40.8	77,813,464	10.7	351,265,143	48.5
1909.	819,396,114	100	323,269,356	39.5	98,690,455	12.0	397,436,303	48.5
1910.	928,432,997	100	379,195,188	40.9	117,261,665	12.6	431,976,144	46.5
1911.	874,707,664	100	358,454,359	41.0	132,730,071	15.2	383,523,234	43.8
1912.	870,279,606	100	369,296,330	42.4	126,846,828	14.6	374,136,448	43.0

TABLE 20. **TAXES.**

Year.	United States.		Eastern District.		Southern District.		Western District.	
	Amount.	Increase over 1900.	Amount.	Increase over 1900.	Amount.	Increase over 1900.	Amount.	Increase over 1900.
		(per cent.)		(per cent.)		(per cent.)		(per cent.)
1900.....	$48,332,273	....	$21,886,359	....	$5,530,270	....	$20,915,644	....
1901.....	50,944,372	5.4	23,213,059	6.1	5,845,456	5.7	21,885,857	4.6
1902.....	54,465,437	12.7	24,653,130	12.6	6,313,014	14.2	23,499,293	12.4
1903.....	57,849,569	19.7	25,841,003	18.1	6,564,725	18.7	25,443,841	21.6
1904.....	61,696,354	27.7	27,281,261	24.6	7,408,685	34.0	27,006,408	29.1
1905.....	63,474,679	31.3	26,822,250	22.6	7,603,059	37.5	29,049,370	38.9
1906.....	74,785,615	54.7	33,966,223	55.2	8,134,906	47.1	32,684,486	56.3
1907.....	80,312,375	66.2	34,997,708	59.9	9,115,747	64.8	36,198,920	73.1
1908.....	84,599,992	75.0	35,075,252	60.3	10,236,454	85.1	39,288,286	87.8
1909.....	90,558,316	87.4	38,003,994	73.6	10,673,226	93.0	41,881,096	100.2
1910.....	103,853,576	114.9	41,882,451	91.4	11,679,163	111.2	50,291,962	140.5
1911.....	108,309,512	124.1	46,350,019	111.8	15,461,908	179.6	*46,497,585	122.3
1912.....	120,091,534	148.5	51,455,928	135.1	16,190,923	192.8	52,444,683	150.7

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TABLE 21.

OPERATING REVENUES IN DETAIL.

Freight Revenue.

Year.	United States.	Eastern District.	Southern District.	Western District.
1900	$1,049,256,323	$469,156,644	$125,075,466	$455,024,213
1901	1,118,543,014	491,669,789	134,712,337	492,160,888
1902	1,207,228,845	523,734,963	147,366,342	536,127,540
1903	1,338,020,026	590,054,009	166,698,746	581,267,271
1904	1,379,002,693	605,269,371	175,638,490	598,094,832
1905	1,450,772,838	638,488,379	185,516,649	626,767,810
1906	1,640,386,655	714,405,951	210,494,544	715,486,160
1907	1,823,651,998	786,454,587	226,908,823	810,288,588
1908	1,656,062,597	704,628,266	210,299,166	741,135,165
1909	1,678,058,645	693,832,426	219,235,117	764,991,102
1910	1,926,940,028	807,378,037	252,352,819	867,209,172
1911	1,925,950,887	846,102,280	298,233,804	781,614,803
1912	1,968,598,630	873,338,982	311,122,036	784,137,612

Passenger Revenue.

1900	$323,715,639	$160,853,114	$35,379,253	$127,483,272
1901	351,356,265	169,106,294	39,574,794	142,675,177
1902	392,963,248	186,893,474	42,714,055	163,355,719
1903	421,704,592	197,943,820	47,268,405	176,492,367
1904	444,326,991	204,348,395	50,636,471	189,342,125
1905	472,694,732	210,219,614	55,996,810	206,478,308
1906	510,032,583	226,471,058	59,601,298	223,960,227
1907	564,606,343	241,020,076	68,343,456	255,242,811
1908	567,071,551	239,019,768	68,466,194	259,585,589
1909	563,746,612	231,691,496	65,491,959	266,563,157
1910	629,452,643	251,888,951	72,459,675	305,104,017
1911	657,638,291	276,892,713	90,820,258	289,925,320
1912	660,373,176	281,602,503	94,660,991	284,109,682

Mail Revenue.

1900	$37,752,474	$14,333,238	$5,060,236	$18,359,000
1901	38,453,602	14,423,534	5,451,268	18,578,800
1902	39,835,844	15,400,400	5,645,390	18,790,054
1903	41,709,396	15,591,998	5,673,966	20,443,432
1904	44,499,732	16,894,898	5,670,773	21,934,061
1905	45,426,125	16,938,488	6,233,660	22,253,977
1906	47,371,453	18,579,757	6,394,819	22,396,877
1907	50,378,964	18,543,577	6,254,146	25,581,241
1908	48,537,768	17,496,906	6,024,777	25,016,085
1909	49,391,681	17,539,833	6,152,346	25,699,502
1910	48,946,052	17,041,450	6,143,317	25,761,285
1911	50,702,625	18,403,859	6,985,944	25,312,822
1912	50,935,856	18,442,687	6,940,402	25,552,767

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TABLE 21—Continued.

Express Revenue.

Year.	United States.	Eastern District.	Southern District.	Western District.
1900	$28,416,150	$14,479,815	$3,091,278	$10,845,057
1901	31,121,613	15,384,911	3,577,832	12,158,870
1902	34,253,459	16,884,485	3,969,332	13,399,642
1903	38,331,964	18,885,169	4,610,614	14,836,181
1904	41,875,636	20,050,421	5,457,546	16,367,669
1905	45,149,155	21,829,801	5,717,101	17,602,253
1906	51,010,930	24,439,278	6,607,694	19,963,958
1907	57,332,931	26,418,747	7,286,018	23,628,166
1908	58,714,502	27,412,120	7,388,966	23,913,416
1909	59,663,774	26,550,848	7,748,113	25,364,813
1910	67,213,583	29,869,378	8,488,213	28,855,992
1911	70,725,137	32,154,998	10,565,819	28,004,320
1912	73,203,730	32,905,994	11,565,112	28,732.624

*Passenger Service Train-Revenue.**

1900	$398,045,285	$193,196,576	$44,192,150	$160,656,559
1901	429,134,462	202,638,763	49,330,077	177,165,622
1902	475,911,320	222,989,100	53,087,993	199,834,227
1903	511,567,229	236,668,452	58,388,947	216,509,830
1904	541,617,105	246,407,833	62,581,282	232,627,990
1905	574,310,154	253,689,270	68,850,861	251,770,023
1906	619,729,203	274,131,533	73,536,581	272,061,089
1907	684,993,137	291,027,152	82,932,119	311,033,866
1908	690,666,227	292,398,155	83,108,013	315,160,059
1909	690,493,165	285,019,287	80,705,983	324,767,895
1910	764,773,354	308,913,379	88,461,397	367,398,578
1911	799,771,186	338,882,833	110,215,315	350,673,038
1912	806,238,267	345,172,512	115,147,163	345,918,592

*Includes passenger, excess baggage, parlor and chair car, mail, express, milk and other passenger train-revenue.

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TABLE 22.

OPERATING EXPENSES IN DETAIL.

Maintenance of Way and Structures.

Year.	United States.	Eastern District.	Southern District.	Western District.
1900	$211,220,521	$87,840,535	$26,615,604	$96,764,382
1901	231,056,602	96,940,667	29,730,976	104,384,959
1902	248,381,594	104,699,229	31,281,619	112,400,746
1903	266,421,774	112,721,464	34,273,554	119,426,756
1904	261,280,454	110,068,086	35,133,095	116,079,273
1905	275,046,036	114,633,121	37,972,711	122,440,204
1906	311,720,820	126,778,495	43,574,284	141,368,041
1907	343,544,907	137,967,918	48,586,723	156,990,266
1908	329,578,071	128,779,292	42,902,528	157,896,251
1909	308,570,767	116,871,021	40,367,112	151,332,634
1910	368,944,774	139,013,044	47,021,069	182,910,661
1911	366,025,262	150,749,921	57,067,778	158,207,563
1912	367,448,229	150,838,598	59,450,331	157,159,300

Maintenance of Equipment.

1900	$181,173,880	$91,951,244	$22,936,483	$66,286,153
1901	190,299,560	93,895,438	24,864,796	71,539,326
1902	213,380,644	104,931,561	27,784,288	80,664,795
1903	240,429,742	115,335,635	33,230,324	91,863,783
1904	267,184,739	128,636,799	36,016,086	102,531,854
1905	288,441,273	137,492,560	39,060,800	111,887,913
1906	328,554,658	155,025,490	45,166,675	128,362,493
1907	368,061,728	170,222,639	52,853,847	144,985,242
1908	368,448,241	165,894,126	53,488,732	149,065,383
1909	363,972,764	161,806,588	50,797,826	151,368,850
1910	413,346,364	183,616,460	58,426,484	171,303,420
1911	428,367,306	198,297,688	71,365,189	158,704,429
1912	450,372,546	211,360,009	78,293,968	160,718,569

Traffic and Transportation.

1900	$529,116,326	$256,268,802	$59,563,542	$213,283,982
1901	565,265,789	268,235,927	64,420,934	232,608,928
1902	609,961,695	286,284,389	69,746,497	253,930,809
1903	702,509,818	336,481,520	81,225,883	284,802,415
1904	758,238,681	356,361,090	88,438,306	313,439,285
1905	771,228,666	360,927,118	92,631,806	317,669,742
1906	836,202,707	386,009,514	105,669,134	344,524,059
1907	970,952,924	436,094,876	125,928,571	408,929,477
1908	916,900,138	404,722,835	116,730,750	395,446,553
1909	863,588,165	372,292,586	107,036,813	384,258,766
1910	973,186,887	412,380,307	115,487,117	445,319,463
1911	1,046,548,472	474,588,362	148,057,209	423,902,901
1912	1,079,837,688	486,032,149	161,784,283	432,021,256

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TABLE 22—Continued.

General.

Year.	United States.	Eastern District.	Southern District.	Western District.
1900	$39,328,765	$16,043,074	$6,002,098	$17,283,593
1901	42,566,553	17,309,942	5,985,174	19,271,437
1902	44,197,880	17,717,322	6,663,358	19,817,200
1903	47,767,947	19,071,833	7,056,958	21,639,156
1904	51,579,196	20,876,096	7,237,944	23,465,156
1905	55,319,805	21,957,055	7,862,270	25,500,480
1906	59,752,230	23,506,148	8,665,342	27,580,740
1907	65,404,655	25,159,180	9,568,613	30,676,862
1908	55,287,963	21,158,791	8,407,844	25,721,328
1909	63,729,941	24,395,790	9,513,076	29,821,075
1910	68,694,684	26,413,433	10,287,534	31,993,717
1911	73,689,373	30,357,531	11,875,776	31,456,066
1912	74,517,548	30,497,637	12,549,051	31,470,860

TABLE 23.

OPERATING RATIO.

(Ratio of operating expenses to operating revenues.)

Year.	United States.	Eastern District.	Southern District.	Western District.
	(per cent.)	(per cent.)	(per cent.)	(per cent.)
1900	64.6	66.7	66.2	62.0
1901	64.8	67.1	66.2	62.1
1902	64.6	67.3	66.0	61.5
1903	66.1	68.8	67.6	62.9
1904	67.7	70.5	68.3	64.8
1905	66.7	69.3	68.1	63.7
1906	66.0	68.1	69.6	62.9
1907	67.5	69.4	74.1	63.8
1908	69.7	70.9	74.0	67.4
1909	66.1	67.6	67.7	64.3
1910	66.2	66.7	66.3	65.8
1911	68.6	70.4	68.5	66.8
1912	69.3	70.4	71.1	67.6

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V. EMPLOYEES AND COMPENSATION.

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TABLE 24.

NUMBER OF EMPLOYEES.

Number of All Employees.

Year.	United States.		Eastern District.		Southern District.		Western District.	
	Number.	Per 100 miles of line.	Number.	Per 100 miles of line.	Number.	Per 100 miles of line.	Number.	Per 100 miles of line.
1900.....	1,017,653	529	468,582	876	134,001	408	415,070	391
1901.....	1,071,169	548	492,559	916	142,526	424	436,084	403
1902.....	1,189,315	594	543,090	1001	157,560	455	488,665	439
1903.....	1,312,537	639	594,573	1080	179,563	509	538,401	468
1904.....	1,296,121	611	586,674	1047	175,153	486	534,294	445
1905.....	1,382,196	637	620,825	1097	186,983	504	574,388	466
1906.....	1,521,355	684	674,726	1173	210,834	551	635,795	502
1907.....	1,672,074	735	731,453	1260	232,513	595	708,108	544
1908.....	1,436,275	623	635,695	1101	206,149	514	594,431	448
1909.....	1,502,823	638	648,391	1119	197,647	479	656,785	482
1910.....	1,699,420	706	726,431	1250	223,257	532	749,732	533
1911.....	1,669,809	678	729,636	1141	276,495	586	663,678	491
1912.....	1,716,380	687	759,638	1182	296,211	615	660,531	481

Number of General and Other Officers.

1900.....	9,585	5	3,646	7	2,396	7	3,543	3
1901.....	9,703	5	3,806	7	2,145	6	3,752	3
1902.....	9,855	5	3,822	7	2,262	6	3,771	3
1903.....	10,043	5	3,891	7	2,351	7	3,801	3
1904.....	10,540	5	4,392	8	2,108	6	4,040	3
1905.....	11,242	5	4,650	8	2,196	6	4,396	4
1906.....	12,795	6	5,430	9	2,433	6	4,932	4
1907.....	13,956	6	5,929	10	2,772	7	5,255	4
1908.....	12,827	5	4,846	8	2,790	7	5,191	4
1909.....	13,514	5	4,912	8	2,762	7	5,840	4
1910.....	14,868	6	5,229	9	2,813	7	6,826	5
1911.....	15,824	6	5,896	9	3,347	7	6,581	5
1912.....	16,204	6	5,938	9	3,756	7	6,510	5

Number of General Office Clerks.

1900.....	32,265	17	14,223	27	4,610	14	13,432	13
1901.....	34,778	18	14,633	27	5,516	16	14,629	14
1902.....	37,570	19	15,888	29	5,860	17	15,822	14
1903.....	42,218	21	17,543	32	6,696	19	17,979	16
1904.....	46,037	22	19,803	35	7,115	20	19,119	16
1905.....	51,284	24	23,106	41	7,308	20	20,870	17
1906.....	57,210	26	26,025	45	8,053	21	23,132	18
1907.....	65,700	29	29,308	50	9,099	23	27,293	21
1908.....	63,973	28	28,441	49	9,476	24	26,056	20
1909.....	69,959	30	29,543	51	9,320	23	31,096	23
1910.....	76,329	32	32,141	55	10,638	25	33,550	24
1911.....	76,513	31	35,259	55	10,641	23	30,613	23
1912.....	78,818	32	36,305	56	11,647	24	30,866	22

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TABLE 24—Continued.

Number of Station Agents.

Year.	United States.		Eastern District.		Southern District.		Western District.	
	Number.	Per 100 miles of line.	Number.	Per 100 miles of line.	Number.	Per 100 miles of line.	Number.	Per 100 miles of line.
1900.....	31,610	16	13,612	25	5,404	16	12,594	12
1901.....	32,294	17	13,853	26	5,497	16	12,944	12
1902.....	33,478	17	14,319	26	5,877	17	13,282	12
1903.....	34,892	17	14,531	26	6,327	18	14,034	12
1904.....	34,918	16	14,507	26	5,816	16	14,595	12
1905.....	35,245	16	14,631	26	5,906	16	14,708	12
1906.....	34,940	16	14,009	24	6,379	17	14,552	11
1907.....	35,649	16	14,353	25	6,341	16	14,955	11
1908.....	35,740	16	14,202	25	6,385	16	15,153	11
1909.....	36,519	15	14,161	25	6,511	16	15,847	12
1910.....	37,379	16	14,261	25	6,758	16	16,360	12
1911.....	38,277	16	15,133	24	7,835	17	15,309	11
1912.....	38,428	15	15,274	24	7,949	17	15,205	11

Number of Other Station Men.

1900.....	89,851	47	49,270	92	11,338	35	29,243	28
1901.....	94,847	49	52,272	97	11,472	34	31,103	29
1902.....	105,433	53	56,910	105	12,466	36	36,057	32
1903.....	120,724	59	63,737	116	16,471	47	40,516	35
1904.....	120,002	57	63,712	114	16,871	47	39,419	33
1905.....	125,180	58	64,630	114	18,234	49	42,316	34
1906.....	138,778	62	70,885	123	19,932	52	47,961	38
1907.....	152,929	67	78,963	136	21,686	56	52,280	40
1908.....	132,013	57	68,481	119	18,794	47	44,738	34
1909.....	136,733	58	71,738	124	18,316	44	46,679	34
1910.....	153,104	64	78,944	136	20,396	49	53,764	38
1911.....	153,117	62	79,960	125	26,223	55	46,934	35
1912.....	161,730	65	83,576	130	28,130	59	50,024	36

Number of Enginemen.

1900.....	42,837	22	20,625	39	5,246	16	16,966	16
1901.....	45,292	23	21,971	41	5,426	16	17,895	17
1902.....	48,318	24	23,297	43	5,681	16	19,340	17
1903.....	52,993	26	25,274	46	6,928	20	20,791	18
1904.....	52,451	25	25,607	46	6,776	19	20,068	17
1905.....	54,817	25	26,362	47	7,160	19	21,295	17
1906.....	59,855	27	28,435	49	7,812	20	23,608	19
1907.....	65,298	29	30,511	53	8,528	22	26,259	20
1908.....	57,668	25	26,754	46	7,878	20	23,036	17
1909.....	57,077	24	26,013	45	7,596	18	23,468	17
1910.....	64,691	27	29,084	50	8,145	19	27,462	20
1911.....	63,390	26	29,857	47	9,901	21	23,632	18
1912.....	64,382	26	30,760	48	10,806	22	22,816	17

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TABLE 24—Continued.

Number of Firemen.

Year.	United States.		Eastern District.		Southern District.		Western District.	
	Number.	Per 100 miles of line.	Number.	Per 100 miles of line.	Number.	Per 100 miles of line.	Number.	Per 100 miles of line.
1900.....	44,130	23	21,874	40	5,322	16	17,434	16
1901.....	47,166	24	22,651	42	5,696	17	18,819	17
1902.....	50,651	25	24,181	45	6,395	18	20,075	18
1903.....	56,041	27	26,561	48	7,612	22	21,868	19
1904.....	55,004	26	26,773	48	7,404	21	20,827	17
1905.....	57,892	27	27,430	48	8,038	22	22,424	18
1906.....	62,678	28	29,061	51	8,625	23	24,992	20
1907.....	69,384	31	32,013	55	9,395	24	27,976	21
1908.....	61,215	27	28,247	49	8,258	21	24,710	19
1909.....	60,349	26	28,145	49	7,893	19	24,311	18
1910.....	68,321	28	30,314	52	8,582	20	29,425	21
1911.....	66,376	27	30,994	49	10,731	23	24,651	18
1912.....	67,195	27	31,892	50	11,793	25	23,510	17

Number of Conductors.

1900.....	29,957	16	14,872	28	3,514	11	11,571	11
1901.....	32,092	16	16,101	30	3,692	11	12,299	11
1902.....	35,070	18	17,613	32	4,075	12	13,382	12
1903.....	39,741	19	19,783	36	4,733	13	15,225	13
1904.....	39,645	19	19,860	35	4,799	13	14,986	12
1905.....	41,061	19	20,311	36	5,164	14	15,586	13
1906.....	43,936	20	21,587	38	5,855	15	16,494	13
1907.....	48,869	22	23,440	40	6,752	17	18,677	14
1908.....	43,322	19	20,883	36	5,813	15	16,626	13
1909.....	43,608	18	20,920	36	5,979	14	16,709	12
1910.....	48,682	20	23,059	40	6,397	15	19,226	14
1911.....	48,200	20	23,309	36	8,079	17	16,812	12
1912.....	49,685	20	24,142	38	8,637	18	16,906	12

Number of Other Trainmen.

1900.....	74,274	39	41,308	77	8,521	26	24,445	23
1901.....	84,493	43	47,129	88	8,847	26	28,517	26
1902.....	91,383	46	49,379	91	9,757	28	32,247	29
1903.....	104,885	51	56,113	102	12,327	35	36,445	32
1904.....	106,734	50	55,636	99	13,136	36	37,962	32
1905.....	111,405	51	56,960	101	14,145	38	40,300	33
1906.....	119,087	53	60,301	105	16,185	42	42,601	34
1907.....	134,257	59	65,667	113	18,630	48	49,960	38
1908.....	114,580	50	56,499	98	15,721	39	42,360	32
1909.....	114,760	49	55,254	95	14,757	36	44,749	33
1910.....	136,938	57	62,398	107	16,642	40	57,898	41
1911.....	133,221	54	62,857	98	19,964	42	50,400	37
1912.....	137,067	55	66,346	103	21,766	45	48,955	36

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TABLE 24—Continued.

Number of Machinists.

Year.	United States.		Eastern District.		Southern District.		Western District.	
	Number.	Per 100 miles of line.	Number.	Per 100 miles of line.	Number.	of line. Per 100 miles	Number.	of line. Per 100 miles
1900.....	32,831	17	17,603	33	3,565	11	11,663	11
1901.....	34,698	18	18,491	34	3,942	12	12,265	11
1902.....	39,145	19	20,984	39	4,681	14	13,480	12
1903.....	44,819	22	23,937	43	4,688	13	16,194	14
1904.....	46,272	22	24,088	43	5,064	14	17,120	14
1905.....	47,018	22	24,422	43	5,232	14	17,364	14
1906.....	51,253	23	27,327	48	5,936	16	17,990	14
1907.....	55,244	24	29,644	51	6,233	16	19,367	15
1908.....	44,941	19	24,749	43	5,298	13	14,894	11
1909.....	48,237	20	25,154	43	5,382	13	17,701	13
1910.....	55,193	23	28,323	49	6,510	16	20,360	14
1911.....	55,207	22	30,701	48	7,788	17	16,718	12
1912.....	57,507	23	32,494	51	8,606	18	16,407	12

Number of Carpenters.

1900.....	46,666	24	20,973	39	7,774	24	17,919	17
1901.....	48,946	25	21,500	40	9,028	27	18,418	17
1902.....	51,698	26	22,528	42	9,188	27	19,982	18
1903.....	56,407	27	25,112	46	9,225	26	22,070	19
1904.....	53,646	25	23,444	42	8,851	25	21,351	18
1905.....	56,089	26	24,595	43	9,614	26	21,880	18
1906.....	63,830	29	28,727	50	10,654	28	24,449	19
1907.....	70,394	31	31,410	54	10,745	28	28,239	22
1908.....	58,946	25	25,153	44	9,929	25	23,864	18
1909.....	60,867	26	26,789	46	9,120	22	24,958	18
1910.....	68,085	28	29,464	51	10,417	25	28,204	20
1911.....	65,989	27	29,537	46	12,800	27	23,652	18
1912.....	70,817	28	31,808	49	14,639	30	24,370	18

Number of Other Shopmen.

1900.....	114,773	60	50,528	94	16,801	51	47,444	45
1901.....	120,550	62	52,873	98	15,749	47	51,928	48
1902.....	136,579	68	60,788	112	17,733	51	58,058	52
1903.....	154,635	75	68,742	125	23,703	67	62,190	54
1904.....	159,472	75	70,852	126	23,362	65	65,258	54
1905.....	176,348	81	74,853	132	27,181	73	74,314	60
1906.....	199,940	90	87,870	153	31,408	82	80,662	64
1907.....	221,656	97	92,242	159	34,779	89	94,635	73
1908.....	176,680	77	79,740	138	24,962	62	71,978	54
1909.....	195,110	83	85,216	147	24,890	60	85,004	62
1910.....	225,196	94	95,058	164	30,716	73	99,422	71
1911.....	226,785	92	93,487	146	45,257	96	88,041	65
1912.....	249,429	100	103,913	162	53,083	110	92,433	67

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TABLE 24—Continued.

Number of Section Foremen.

Year.	United States.		Eastern District.		Southern District.		Western District.	
	Number.	Per 100 miles of line.	Number.	Per 100 miles of line.	Number.	Per 100 miles of line.	Number.	Per 100 miles of line.
1900.....	33,085	17	11,687	22	4,717	14	16,681	16
1901.....	33,817	17	11,844	22	4,906	15	17,067	16
1902.....	35,700	18	12,870	24	5,156	15	17,674	16
1903.....	37,101	18	13,138	24	5,324	15	18,639	16
1904.....	37,609	18	12,981	23	5,611	16	19,017	16
1905.....	38,217	18	13,220	23	5,632	15	19,365	16
1906.....	40,463	18	13,873	24	6,023	16	20,567	16
1907.....	41,391	18	14,056	24	6,224	16	21,111	16
1908.....	41,419	18	13,831	24	6,247	16	21,341	16
1909.....	41,859	18	13,945	24	6,293	15	21,621	16
1910.....	44,207	18	14,359	25	6,528	16	23,320	17
1911.....	44,466	18	15,213	24	7,543	16	21,710	16
1912.....	44,277	18	15,257	24	7,751	16	21,269	15

Number of Other Trackmen.

1900.....	226,799	118	82,921	155	32,169	98	111,709	105
1901.....	239,166	122	87,950	164	35,694	106	115,522	107
1902.....	281,075	140	102,275	189	42,594	123	136,206	122
1903.....	300,714	147	111,421	202	43,568	124	145,725	127
1904.....	289,044	136	105,476	188	41,562	115	142,006	118
1905.....	311,185	143	114,344	202	44,562	120	152,279	124
1906.....	343,791	155	123,496	215	48,666	127	171,629	136
1907.....	367,277	162	128,822	222	51,727	132	186,728	143
1908.....	299,448	130	101,612	176	45,776	114	152,060	115
1909.....	320,762	136	110,316	190	43,000	104	167,446	123
1910.....	378,955	157	129,588	223	48,525	116	200,842	143
1911.....	363,028	147	121,272	190	61,473	130	180,283	134
1912.....	357,326	143	127,486	198	62,647	130	167,193	122

Number of Switch Tenders, Crossing Tenders, and Watchmen.

1900.....	50,789	26	28,476	53	5,269	16	17,044	16
1901.....	47,576	24	26,207	49	5,444	16	15,925	15
1902.....	50,489	25	27,952	52	5,346	15	17,191	15
1903.....	49,961	24	26,335	48	6,225	18	17,401	15
1904.....	46,262	22	25,688	46	5,333	15	15,241	13
1905.....	45,532	21	25,798	46	5,093	14	14,641	12
1906.....	49,659	22	25,518	44	5,991	16	18,150	14
1907.....	53,414	23	29,534	51	6,091	16	17,789	14
1908.....	46,221	20	27,211	47	5,273	13	13,737	10
1909.....	44,698	19	26,883	46	4,808	12	13,007	10
1910.....	44,682	19	28,495	49	4,997	12	11,190	8
1911.....	40,005	16	26,922	42	4,685	10	8,398	6
1912.....	38,773	15	25,882	40	5,009	10	7,882	6

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TABLE 24—Continued.

Number of Telegraph Operators and Dispatchers.

Year.	United States.		Eastern District.		Southern District.		Western District.	
	Number.	Per 100 miles of line.	Number.	Per 100 miles of line.	Number.	Per 100 miles of line.	Number.	Per 100 miles of line.
1900.....	25,218	13	12,389	23	3,345	10	9,484	9
1901.....	26,606	14	12,993	24	3,502	10	10,111	9
1902.....	28,244	14	13,367	25	3,529	10	11,348	10
1903.....	30,984	15	14,722	27	3,907	11	12,265	11
1904.....	30,425	14	14,767	26	4,127	11	11,531	10
1905.....	31,963	15	15,261	27	4,381	12	12,321	10
1906.....	36,090	16	16,797	29	5,243	14	14,050	11
1907.....	39,193	17	17,908	31	5,853	15	15,432	12
1908.....	39,744	17	18,682	32	5,797	14	15,265	12
1909.....	39,115	17	18,823	32	5,380	13	14,912	11
1910.....	42,435	18	19,602	34	5,764	14	17,069	12
1911.....	41,196	17	20,566	32	5,773	12	14,857	11
1912.....	42,548	17	21,248	33	6,578	14	14,722	11

*Number of All Other Employees and Laborers.**

1900.....	132,983	69	65,075	122	14,010	43	53,898	51
1901.....	139,145	71	68,285	127	15,970	47	54,890	51
1902.....	154,627	77	76,917	142	16,960	49	60,750	54
1903.....	176,379	86	83,733	152	19,388	55	73,258	64
1904.....	168,060	79	79,088	141	17,218	48	71,754	60
1905.....	187,718	86	90,252	159	17,137	46	80,329	65
1906.....	207,050	93	95,385	166	21,639	57	90,026	71
1907.....	237,463	104	107,653	185	27,658	71	102,152	78
1908.....	207,538	90	96,364	167	27,752	69	83,422	63
1909.....	219,656	94	90,579	156	25,640	62	103,437	76
1910.....	240,355	99	106,112	183	29,429	70	104,814	74
1911.....	238,215	97	108,673	170	34,455	73	95,087	70
1912.....	242,194	97	107,317	167	33,414	70	101,463	74

* Including floating equipment employees.

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TABLE 25.

AGGREGATE ANNUAL COMPENSATION OF EMPLOYEES.

Compensation of All Employees.

Year.	United States.	Eastern District.	Southern District.	Western District.
1900	$577,264,841	$268,114,423	$66,668,969	$242,481,449
1901	610,713,701	279,700,804	71,298,098	259,714,799
1902	676,028,592	311,019,931	77,440,709	287,567,952
1903	757,321,415	357,762,999	89,928,438	309,629,978
1904	817,598,810	375,756,880	95,218,700	346,623,230
1905	839,944,680	385,864,578	100,141,548	353,938,554
1906	900,801,653	422,743,890	114,262,040	363,795,723
1907	1,072,386,427	478,725,152	134,069,807	459,591,468
1908	1,035,437,528	458,577,320	127,933,543	448,926,665
1909	988,323,694	430,724,008	117,686,782	439,912,904
1910	1,143,725,306	494,562,704	132,954,744	516,207,858
1911	1,208,466,470	558,101,577	172,856,304	477,508,589
1912	1,252,347,697	571,429,031	190,389,878	490,528,788

Compensation of General and Other Officers.

1900	$21,298,920	$8,439,877	$3,544,756	$9,314,287
1901	22,196,617	8,731,302	3,569,040	9,896,275
1902	22,581,430	8,800,664	3,755,729	10,025,037
1903	23,254,220	9,225,836	4,162,612	9,865,772
1904	25,292,006	10,195,990	4,086,354	11,009,662
1905	26,754,447	10,550,326	4,307,971	11,896,150
1906	28,781,572	11,875,326	4,638,553	12,267,693
1907	32,243,832	13,244,874	5,233,263	13,765,695
1908	32,903,307	13,082,224	5,403,085	14,417,998
1909	33,816,386	13,446,439	5,388,781	14,981,166
1910	37,448,770	14,392,147	5,815,830	17,240,793
1911	39,864,265	16,339,178	6,789,041	16,736,046
1912	41,502,574	16,596,951	7,483,801	17,421,822

Compensation of General Office Clerks.

1900	$23,127,228	$10,401,892	$2,964,926	$9,760,410
1901	24,833,944	10,834,183	3,537,660	10,462,101
1902	26,853,600	11,751,033	3,806,617	11,295,950
1903	30,486,272	13,388,416	4,344,774	12,753,082
1904	34,735,708	15,406,856	4,942,846	14,386,006
1905	37,445,570	16,946,770	5,133,997	15,364,803
1906	41,227,916	19,612,572	5,698,143	15,917,201
1907	48,340,123	22,086,219	6,559,973	19,693,931
1908	51,867,978	23,228,314	6,955,025	21,684,639
1909	52,516,034	23,759,052	6,877,611	21,879,371
1910	58,176,906	25,891,997	7,748,535	24,536,374
1911	61,971,046	30,038,608	8,347,493	23,584,945
1912	64,739,954	30,890,301	9,151,112	24,698,541

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TABLE 25—Continued.

Compensation of Station Agents.

Year.	United States.	Eastern District.	Southern District.	Western District.
1900	$18,553,252	$7,924,490	$2,501,059	$8,127,703
1901	19,239,279	8,050,486	2,742,705	8,446,088
1902	20,172,608	8,478,172	2,939,886	8,754,550
1903	21,011,724	9,002,787	3,229,841	8,779,096
1904	22,584,269	9,420,432	3,213,848	9,949,989
1905	23,112,137	9,382,329	3,354,044	10,375,764
1906	22,571,595	9,240,392	3,508,395	9,822,808
1907	24,831,066	9,990,444	3,820,655	11,019,967
1908	25,908,206	10,243,958	4,008,452	11,655,796
1909	25,881,387	10,253,907	3,974,198	11,653,282
1910	27,203,943	10,532,819	4,171,259	12,499,865
1911	28,922,662	11,775,573	5,301,162	11,845,927
1912	29,935,642	12,019,702	5,629,638	12,286,302

Compensation of Other Station Men.

1900	$45,627,016	$26,070,349	$4,574,680	$14,981,987
1901	47,496,433	26,775,226	4,729,417	15,991,790
1902	53,709,985	29,496,430	5,474,547	18,739,008
1903	60,463,462	34,531,222	6,377,802	19,554,438
1904	66,318,729	36,722,918	7,258,999	22,336,812
1905	67,012,465	36,356,808	7,948,230	22,707,427
1906	70,702,517	38,486,726	8,981,761	23,234,030
1907	84,244,486	43,603,565	10,522,159	30,118,762
1908	81,766,135	42,888,876	9,962,672	28,914,587
1909	79,089,030	41,651,430	9,285,134	28,152,466
1910	88,926,764	46,323,577	10,066,847	32,536,340
1911	95,317,815	51,470,197	13,669,248	30,178,370
1912	97,612,039	51,673,714	14,953,189	30,985,136

Compensation of Enginemen.

1900	$50,713,401	$23,463,327	$6,464,086	$20,785,988
1901	53,353,624	24,196,914	6,744,119	22,412,591
1902	58,135,447	26,584,476	7,253,620	24,297,351
1903	64,173,825	30,326,989	8,596,371	25,250,465
1904	68,946,543	31,823,340	8,989,046	28,134,157
1905	70,626,750	32,475,836	9,456,034	28,694,880
1906	74,581,454	34,498,928	10,451,619	29,630,907
1907	87,496,778	38,759,235	12,300,003	36,437,540
1908	84,517,730	37,153,483	11,505,644	35,858,603
1909	78,988,116	33,975,945	10,511,778	34,500,393
1910	91,323,678	39,396,294	11,849,915	40,077,469
1911	97,167,687	45,687,915	15,021,307	36,458,465
1912	102,762,809	46,932,577	17,299,773	38,530,459

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TABLE 25—Continued.

Compensation of Firemen.

Year.	United States.	Eastern District.	Southern District.	Western District.
1900	$29,203,596	$13,570,153	$3,128,405	$12,505,038
1901	30,941,619	14,025,547	3,298,865	13,617,207
1902	33,780,709	15,454,860	3,535,898	14,789,951
1903	37,484,283	17,877,765	4,216,619	15,389,899
1904	40,463,040	18,931,430	4,436,611	17,094,999
1905	41,701,463	19,400,153	4,710,690	17,590,620
1906	44,247,306	20,631,902	5,257,405	18,357,999
1907	52,474,059	23,530,616	6,266,772	22,676,671
1908	50,747,825	22,277,144	5,953,609	22,517,072
1909	48,294,077	21,323,360	5,321,310	21,649,407
1910	55,626,502	23,855,272	6,047,565	25,723,665
1911	59,825,811	27,904,846	8,094,831	23,826,134
1912	62,117,000	28,746,237	9,217,396	24,153,367

Compensation of Conductors.

1900	$30,089,322	$14,588,085	$3,338,020	$12,163,217
1901	32,352,367	15,644,632	3,631,904	13,075,831
1902	35,211,477	17,343,372	3,994,466	13,873,639
1903	39,932,537	20,107,915	4,741,402	15,083,220
1904	44,150,760	21,372,189	5,032,600	17,745,971
1905	44,758,533	21,438,926	5,195,360	18,124,247
1906	47,417,403	22,842,639	6,049,094	18,525,670
1907	55,847,244	25,999,254	7,446,308	22,401,682
1908	55,479,055	25,459,125	7,008,278	23,011,652
1909	51,873,772	23,364,582	6,629,923	21,879,267
1910	59,716,891	26,980,714	7,294,887	25,441,290
1911	65,793,064	31,475,164	10,539,424	23,778,476
1912	68,695,203	32,077,717	11,644,315	24,973,171

Compensation of Other Trainmen.

1900	$44,844,475	$25,115,516	$4,217,310	$15,511,649
1901	51,646,290	28,234,098	4,600,892	18,811,300
1902	56,335,462	30,538,806	5,056,756	20,739,900
1903	66,221,636	36,744,567	6,127,788	23,349,331
1904	75,521,384	39,066,367	7,174,838	29,280,179
1905	77,416,200	39,632,078	7,630,058	30,154,064
1906	81,884,828	42,391,837	8,773,020	30,719,971
1907	99,978,356	49,479,839	11,025,734	39,472,783
1908	97,456,690	47,319,175	10,788,047	39,349,468
1909	89,710,526	42,168,671	9,201,597	38,340,258
1910	109,664,112	49,952,155	10,536,810	49,175,147
1911	120,665,943	59,395,230	15,039,734	46,230,979
1912	127,060,109	62,369,067	16,893,390	47,797,652

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TABLE 25—Continued.

Compensation of Machinists.

Year.	United States.	Eastern District.	Southern District.	Western District.
1900	$22,924,702	$11,752,826	$2,525,689	$8,646,187
1901	24,745,769	12,572,026	2,808,906	9,364,837
1902	28,412,840	14,491,405	3,169,365	10,752,070
1903	33,414,954	17,309,980	3,489,691	12,615,283
1904	37,344,571	18,215,488	4,019,916	15,109,167
1905	37,495,267	18,426,289	4,105,408	14,963,570
1906	40,326,031	21,059,438	4,840,313	14,426,280
1907	46,475,695	23,354,677	5,271,563	17,849,455
1908	42,368,436	21,433,508	4,635,951	16,298,977
1909	41,731,839	19,966,545	4,415,081	17,350,213
1910	48,589,476	23,756,705	5,365,691	19,467,080
1911	51,442,148	26,759,959	6,837,972	17,844,217
1912	54,327,638	28,628,347	7,611,387	18,087,904

Compensation of Carpenters.

1900	$28,144,452	$12,330,247	$4,095,869	$11,718,336
1901	29,937,027	12,723,170	4,907,786	12,306,071
1902	31,925,126	13,684,053	4,855,578	13,385,495
1903	35,526,545	15,958,500	5,133,440	14,434,605
1904	36,654,270	15,911,760	5,296,743	15,445,767
1905	36,501,025	16,185,099	5,456,513	14,859,413
1906	40,961,083	19,186,374	6,359,591	15,415,118
1907	49,082,659	21,878,135	6,864,980	20,339,544
1908	44,552,855	19,179,500	6,809,861	18,563,494
1909	43,420,646	18,516,139	5,874,567	19,029,940
1910	50,058,065	21,268,538	6,549,239	22,240,288
1911	49,892,732	22,284,018	8,470,764	19,137,950
1912	53,241,527	23,420,045	10,006,928	19,814,554

Compensation of Other Shopmen.

1900	$59,470,846	$25,429,919	$7,265,766	$26,775,161
1901	63,951,988	27,558,259	7,246,303	29,147,426
1902	73,269,159	31,638,199	8,234,918	33,396,042
1903	84,133,168	37,769,217	11,425,552	34,938,399
1904	94,463,049	41,582,311	11,808,912	41,071,826
1905	101,164,035	42,822,583	13,392,544	44,948,908
1906	111,524,564	51,049,849	15,275,904	45,198,811
1907	132,421,765	55,963,718	17,843,245	58,614,802
1908	121,695,515	53,253,122	14,735,782	53,706,611
1909	119,909,837	52,166,318	13,051,143	54,692,376
1910	145,457,974	60,655,730	16,562,871	68,239,373
1911	155,438,461	65,186,298	25,367,658	64,884,505
1912	167,807,528	71,408,610	29,606,131	66,792,787

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TABLE 25—Continued.

Compensation of Section Foremen.

Year.	United States.	Eastern District.	Southern District.	Western District.
1900	$18,481,594	$6,549,877	$2,343,637	$9,588,080
1901	19,191,808	6,725,847	2,524,429	9,941,532
1902	20,356,376	7,386,623	2,614,405	10,355,348
1903	21,430,984	7,976,168	2,912,010	10,542,806
1904	22,555,363	8,058,287	3,094,433	11,402,643
1905	23,041,754	8,223,602	3,109,671	11,708,481
1906	23,519,671	8,606,374	3,353,771	11,559,526
1907	26,326,635	9,243,909	3,651,305	13,431,421
1908	27,658,733	9,607,972	3,731,159	14,319,602
1909	27,405,664	9,523,389	3,717,091	14,165,184
1910	29,424,298	9,870,196	3,924,091	15,630,011
1911	31,268,187	11,276,108	4,874,099	15,117,980
1912	31,758,239	11,367,354	5,157,128	15,233,757

Compensation of Other Trackmen.

1900	$71,664,298	$28,357,749	$8,606,523	$34,700,026
1901	76,228,053	30,223,898	9,339,266	36,664,889
1902	89,536,409	35,170,139	10,417,924	43,948,346
1903	103,426,685	41,614,849	11,458,270	50,353,566
1904	104,600,785	41,960,489	12,450,486	50,189,810
1905	103,413,280	43,332,199	12,287,899	47,793,182
1906	112,196,214	47,471,672	14,126,909	50,597,633
1907	135,793,476	51,966,475	16,313,258	67,513,743
1908	122,994,426	45,465,039	14,771,021	62,758,366
1909	110,769,229	40,066,897	13,075,181	57,627,151
1910	140,200,782	50,926,362	14,687,812	74,586,608
1911	137,893,137	54,809,686	18,027,462	65,055,989
1912	136,067,014	54,606,873	19,586,959	61,873,182

Compensation of Switch Tenders, Crossing Tenders, and Watchmen.

1900	$29,599,258	$15,068,933	$2,834,588	$11,695,737
1901	26,473,608	13,048,719	2,742,701	10,682,188
1902	28,669,990	14,560,560	2,774,895	11,334,535
1903	27,162,555	13,774,363	3,082,740	10,305,452
1904	26,920,495	13,859,983	2,608,224	10,452,288
1905	26,355,957	14,129,406	2,597,025	9,629,526
1906	27,939,001	13,735,029	3,313,489	10,890,483
1907	32,184,636	16,213,339	3,058,402	12,912,895
1908	27,607,830	14,754,405	2,514,526	10,338,899
1909	25,521,433	14,211,453	2,258,519	9,051,461
1910	24,880,701	15,370,983	2,432,643	7,077,075
1911	22,835,972	15,415,134	2,372,367	5,048,471
1912	22,982,964	15,146,139	2,356,840	5,479,985

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TABLE 25—Continued.

Compensation of Telegraph Operators and Dispatchers.

Year.	United States.	Eastern District.	Southern District.	Western District.
1900	$16,176,401	$7,760,171	$1,897,712	$6,518,518
1901	17,152,034	8,015,976	2,038,510	7,097,548
1902	18,281,069	8,316,876	2,113,857	7,850,336
1903	19,962,487	9,620,705	2,340,235	8,001,547
1904	21,770,296	10,228,682	2,632,027	8,909,587
1905	22,638,034	10,500,268	2,831,148	9,306,618
1906	24,729,669	11,371,233	3,444,676	9,913,760
1907	29,058,251	12,721,050	4,254,934	12,082,267
1908	30,989,257	13,655,095	4,343,973	12,990,189
1909	29,896,851	13,819,080	3,861,414	12,216,357
1910	32,348,603	14,352,125	4,085,203	13,911,275
1911	34,398,705	16,543,259	4,715,263	13,140,183
1912	34,890,615	16,369,109	5,313,688	13,207,818

*Compensation of All Other Employees and Laborers.**

1900	$67,346,080	$31,291,012	$6,365,943	$29,689,125
1901	70,973,241	32,340,521	6,835,595	31,797,125
1902	78,796,905	37,324,263	7,442,248	34,030,394
1903	89,236,078	42,533,720	8,289,341	38,413,017
1904	95,277,542	43,000,358	8,172,817	44,104,367
1905	100,507,763	46,061,906	8,624,956	45,820,901
1906	108,190,829	50,683,599	10,189,397	47,317,833
1907	135,587,366	60,689,803	13,637,253	61,260,310
1908	136,923,550	59,576,380	14,806,458	62,540,712
1909	129,498,867	52,510,801	14,243,454	62,744,612
1910	144,677,841	61,037,090	15,815,546	67,825,205
1911	155,768,835	71,740,404	19,388,479	64,639,952
1912	156,846,842	69,176,288	18,478,203	69,192,351

* Including floating equipment employees.

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TABLE 26.

AVERAGE DAILY COMPENSATION OF EMPLOYEES.

Average Daily Compensation of All Employees.

Year.	United States.	Eastern District.	Southern District.	Western District.
1900	$1.90	$1.87	$1.62	$2.03
1901	1.91	1.89	1.63	2.04
1902	1.92	1.90	1.64	2.04
1903	1.99	1.99	1.65	2.11
1904	2.05	2.05	1.72	2.17
1905	2.07	2.06	1.78	2.18
1906	2.08	2.09	1.82	2.17
1907	2.20	2.20	1.93	2.29
1908	2.25	2.26	1.94	2.34
1909	2.24	2.26	1.96	2.30
1910	2.29	2.31	2.00	2.36
1911	2.39	2.46	2.14	2.42
1912	2.42	2.48	2.20	2.46

Average Daily Compensation of General and Other Officers.

1900	$7.56	$8.30	$4.75	$8.82
1901	7.85	8.26	5.50	8.82
1902	7.88	8.43	5.45	8.86
1903	7.98	8.85	5.37	9.01
1904	8.35	8.64	6.35	9.14
1905	8.32	8.55	6.36	9.11
1906	8.08	7.99	6.65	8.92
1907	8.16	8.25	6.32	9.08
1908	8.44	8.93	6.10	9.33
1909	8.45	8.97	6.43	8.99
1910	8.35	9.19	6.62	8.44
1911	8.22	9.13	6.53	8.29
1912	8.33	9.07	6.45	8.75

Average Daily Compensation of General Office Clerks.

1900	$2.19	$2.23	$1.94	$2.24
1901	2.19	2.25	2.01	2.21
1902	2.18	2.25	1.93	2.21
1903	2.21	2.33	1.90	2.21
1904	2.22	2.32	2.00	2.20
1905	2.24	2.36	2.05	2.19
1906	2.24	2.31	2.07	2.23
1907	2.30	2.36	2.13	2.30
1908	2.33	2.41	2.10	2.34
1909	2.31	2.44	2.17	2.22
1910	2.40	2.52	2.22	2.35
1911	2.49	2.56	2.39	2.44
1912	2.50	2.57	2.41	2.45

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TABLE 26—Continued.

Average Daily Compensation of Station Agents.

Year.	United States.	Eastern District.	Southern District.	Western District.
1900	$1.75	$1.71	$1.43	$1.93
1901	1.77	1.74	1.47	1.94
1902	1.80	1.78	1.47	1.97
1903	1.87	1.84	1.58	2.03
1904	1.93	1.90	1.62	2.09
1905	1.93	1.90	1.66	2.08
1906	1.94	1.94	1.67	2.07
1907	2.05	2.04	1.76	2.18
1908	2.09	2.10	1.78	2.21
1909	2.08	2.08	1.82	2.19
1910	2.12	2.14	1.84	2.20
1911	2.17	2.24	1.93	2.24
1912	2.20	2.26	1.98	2.26

Average Daily Compensation of Other Station Men.

1900	$1.60	$1.65	$1.29	$1.64
1901	1.59	1.63	1.30	1.64
1902	1.61	1.64	1.31	1.66
1903	1.64	1.73	1.13	1.73
1904	1.69	1.77	1.26	1.77
1905	1.71	1.77	1.37	1.76
1906	1.69	1.75	1.39	1.74
1907	1.78	1.82	1.47	1.85
1908	1.82	1.88	1.47	1.88
1909	1.82	1.87	1.49	1.87
1910	1.84	1.91	1.50	1.88
1911	1.89	1.97	1.61	1.91
1912	1.89	1.97	1.62	1.91

Average Daily Compensation of Enginemen.

1900	$3.75	$3.62	$3.84	$3.88
1901	3.78	3.63	3.92	3.91
1902	3.84	3.71	4.05	3.94
1903	4.01	3.91	4.16	4.09
1904	4.10	3.97	4.23	4.22
1905	4.12	3.96	4.27	4.26
1906	4.12	3.98	4.33	4.23
1907	4.30	4.15	4.57	4.36
1908	4.45	4.30	4.52	4.59
1909	4.44	4.29	4.45	4.61
1910	4.55	4.39	4.63	4.70
1911	4.79	4.71	4.85	4.90
1912	5.00	4.82	5.27	5.13

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TABLE 26—Continued.

Average Daily Compensation of Firemen.

Year.	United States.	Eastern District.	Southern District.	Western District.
1900	$2.14	$2.05	$1.88	$2.33
1901	2.16	2.07	1.92	2.34
1902	2.20	2.12	1.94	2.37
1903	2.28	2.23	1.97	2.46
1904	2.35	2.29	2.04	2.54
1905	2.38	2.32	2.00	2.58
1906	2.42	2.37	2.08	2.60
1907	2.54	2.47	2.26	2.70
1908	2.64	2.56	2.23	2.87
1909	2.67	2.58	2.24	2.90
1910	2.74	2.63	2.32	2.98
1911	2.94	2.88	2.57	3.22
1912	3.02	2.94	2.81	3.25

Average Daily Compensation of Conductors.

1900	$3.17	$3.03	$3.07	$3.40
1901	3.17	3.03	3.05	3.39
1902	3.21	3.10	3.09	3.39
1903	3.38	3.29	3.22	3.56
1904	3.50	3.34	3.22	3.81
1905	3.50	3.34	3.22	3.82
1906	3.51	3.33	3.32	3.84
1907	3.69	3.48	3.67	3.98
1908	3.81	3.59	3.65	4.14
1909	3.81	3.58	3.56	4.19
1910	3.91	3.71	3.63	4.27
1911	4.16	4.03	4.00	4.46
1912	4.29	4.11	4.25	4.61

Average Daily Compensation of Other Trainmen.

1900	$1.96	$1.95	$1.64	$2.11
1901	2.00	1.98	1.67	2.16
1902	2.04	2.03	1.68	2.18
1903	2.17	2.18	1.69	2.33
1904	2.27	2.24	1.76	2.48
1905	2.31	2.28	1.81	2.52
1906	2.35	2.36	1.89	2.50
1907	2.54	2.53	2.08	2.72
1908	2.60	2.60	2.06	2.79
1909	2.59	2.57	2.03	2.80
1910	2.69	2.68	2.08	2.87
1911	2.88	2.94	2.43	3.00
1912	2.96	3.00	2.57	3.11

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TABLE 26—Continued.

Average Daily Compensation of Machinists.

Year.	United States.	Eastern District.	Southern District.	Western District.
1900	$2.30	$2.21	$2.32	$2.44
1901	2.32	2.21	2.26	2.50
1902	2.36	2.25	2.27	2.57
1903	2.50	2.37	2.52	2.70
1904	2.61	2.46	2.59	2.82
1905	2.65	2.47	2.66	2.92
1906	2.69	2.55	2.74	2.90
1907	2.87	2.68	2.87	3.15
1908	2.95	2.78	2.94	3.23
1909	2.98	2.79	2.85	3.26
1910	3.08	2.90	2.93	3.38
1911	3.14	2.98	3.09	3.47
1912	3.21	3.04	3.24	3.56

Average Daily Compensation of Carpenters.

1900	$2.04	$2.02	$1.71	$2.21
1901	2.06	2.04	1.75	2.24
1902	2.08	2.06	1.73	2.27
1903	2.19	2.16	1.89	2.35
1904	2.26	2.23	1.97	2.41
1905	2.25	2.24	2.00	2.38
1906	2.28	2.33	2.03	2.33
1907	2.40	2.43	2.16	2.45
1908	2.40	2.42	2.16	2.47
1909	2.43	2.42	2.21	2.52
1910	2.51	2.51	2.23	2.59
1911	2.54	2.60	2.37	2.56
1912	2.55	2.63	2.38	2.57

Average Daily Compensation of Other Shopmen.

1900	$1.73	$1.67	$1.47	$1.89
1901	1.75	1.74	1.49	1.85
1902	1.78	1.73	1.54	1.91
1903	1.86	1.86	1.59	1.99
1904	1.91	1.88	1.62	2.06
1905	1.92	1.90	1.65	2.05
1906	1.92	1.93	1.66	2.01
1907	2.06	2.05	1.76	2.18
1908	2.12	2.11	1.84	2.22
1909	2.13	2.11	1.84	2.23
1910	2.18	2.18	1.90	2.27
1911	2.24	2.29	1.98	2.31
1912	2.24	2.28	1.96	2.34

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TABLE 26—Continued.

Average Daily Compensation of Section Foremen.

Year.	United States.	Eastern District.	Southern District.	Western District.
1900	$1.68	$1.69	$1.46	$1.74
1901	1.71	1.72	1.51	1.75
1902	1.72	1.75	1.52	1.76
1903	1.78	1.83	1.58	1.79
1904	1.78	1.87	1.61	1.78
1905	1.79	1.88	1.62	1.78
1906	1.80	1.89	1.68	1.77
1907	1.90	1.99	1.73	1.89
1908	1.95	2.04	1.75	1.96
1909	1.96	2.04	1.78	1.96
1910	1.99	2.09	1.81	1.98
1911	2.07	2.17	1.92	2.05
1912	2.09	2.18	1.96	2.08

Average Daily Compensation of Other Trackmen.

1900	$1.22	$1.23	$0.93	$1.30
1901	1.23	1.25	0.95	1.32
1902	1.25	1.26	0.95	1.34
1903	1.31	1.33	0.96	1.40
1904	1.33	1.36	1.01	1.41
1905	1.32	1.36	1.04	1.37
1906	1.36	1.42	1.07	1.41
1907	1.46	1.50	1.15	1.52
1908	1.45	1.54	1.14	1.48
1909	1.38	1.49	1.12	1.38
1910	1.47	1.56	1.15	1.49
1911	1.50	1.63	1.21	1.49
1912	1.50	1.64	1.24	1.48

Average Daily Compensation of Switch Tenders, Crossing Tenders, and Watchmen.

1900	$1.80	$1.63	$1.59	$2.17
1901	1.74	1.57	1.54	2.08
1902	1.77	1.60	1.58	2.11
1903	1.76	1.59	1.56	2.18
1904	1.77	1.63	1.53	2.10
1905	1.79	1.66	1.67	2.06
1906	1.80	1.62	1.76	2.12
1907	1.87	1.68	1.64	2.26
1908	1.78	1.63	1.44	2.18
1909	1.73	1.61	1.40	2.11
1910	1.69	1.65	1.40	1.91
1911	1.74	1.75	1.48	1.85
1912	1.70	1.73	1.38	1.81

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TABLE 26—Continued.

Average Daily Compensation of Telegraph Operators and Dispatchers.

Year.	United States.	Eastern District.	Southern District.	Western District.
1900	$1.96	$1.90	$1.67	$2.14
1901	1.98	1.91	1.71	2.17
1902	2.01	1.94	1.74	2.18
1903	2.08	2.04	1.78	2.23
1904	2.15	2.10	1.85	2.32
1905	2.19	2.13	2.00	2.34
1906	2.13	2.04	2.04	2.28
1907	2.26	2.17	2.16	2.40
1908	2.30	2.22	2.13	2.45
1909	2.30	2.20	2.15	2.48
1910	2.33	2.23	2.19	2.49
1911	2.44	2.36	2.30	2.61
1912	2.47	2.38	2.36	2.63

*Average Daily Compensation of All Other Employees and Laborers.**

1900	$1.72	$1.60	$1.49	$1.93
1901	1.70	1.60	1.39	1.91
1902	1.73	1.63	1.40	1.95
1903	1.78	1.70	1.39	2.02
1904	1.83	1.76	1.51	1.99
1905	1.85	1.76	1.55	2.02
1906	1.84	1.79	1.57	1.98
1907	1.93	1.86	1.67	2.08
1908	1.99	1.91	1.69	2.16
1909	1.99	1.92	1.77	2.12
1910	2.02	1.93	1.79	2.17
1911	2.09	2.10	1.88	2.19
1912	2.11	2.11	1.89	2.20

* Including floating equipment employees.

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VI. EQUIPMENT.

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TABLE 27.

NUMBER OF LOCOMOTIVES.

Year.	United States.		Eastern District.		Southern District.		Western District.	
	Number.	Per 1,000 miles of line.	Number.	Per 1,000 miles of line.	Number.	Per 1,000 miles of line.	Number.	Per 1,000 miles of line.
1900....	37,663	195	18,216	340	4,461	136	14,986	141
1901....	39,584	202	19,010	354	4,839	144	15,735	145
1902....	41,225	206	19,532	360	5,029	145	16,664	150
1903....	43,871	214	20,510	373	5,309	151	18,052	157
1904....	46,743	220	21,547	384	5,792	161	19,404	161
1905....	48,357	223	22,247	393	6,162	166	19,948	162
1906....	51,672	232	23,953	416	6,668	174	21,051	166
1907....	55,388	243	25,029	431	7,400	189	22,959	176
1908....	56,733	246	25,256	437	7,727	193	23,750	179
1909....	57,212	243	25,311	437	7,772	188	24,129	177
1910....	58,947	245	25,898	446	7,802	186	25,247	179
1911....	61,327	249	28,233	442	9,661	205	23,433	174
1912....	62,262	249	28,267	440	10,086	209	23,909	174

TABLE 28.

TRACTIVE POWER OF LOCOMOTIVES—UNITED STATES.

Year.	Aggregate tractive power.	Average tractive power per locomotive.
	(pounds.)	(pounds.)
1902	768,502,779	20,485
1903	941,915,540	21,781
1904	1,052,307,261	22,804
1905	1,128,771,082	23,666
1906	1,260,633,673	24,741
1907	1,409,006,658	25,823
1908	1,477,756,536	26,384
1909	1,503,971,444	26,634
1910	1,588,894,480	27,282
1911	1,681,495,905	27,949
1912	1,746,964,128	28,634

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TABLE 29.

NUMBER OF CARS—ALL KINDS.

Year.	United States.		Eastern District.		Southern District.		Western District.	
	Number.	Per 1,000 miles of line.	Number.	Per 1,000 miles of line.	Number.	Per 1,000 miles of line.	Number.	Per 1,000 miles of line.
1900....	1,450,838	7,535	750,455	14,023	158,281	4,818	542,102	5,105
1901....	1,550,833	7,930	800,814	14,892	171,949	5,114	578,070	5,344
1902....	1,640,185	8,195	830,752	15,317	182,366	5,271	627,067	5,633
1903....	1,753,389	8,540	864,262	15,702	200,586	5,688	688,541	5,987
1904....	1,798,561	8,474	870,659	15,536	210,572	5,843	717,330	5,970
1905....	1,842,871	8,494	880,140	15,555	226,191	6,096	736,540	5,974
1906....	1,958,912	8,810	933,024	16,221	251,366	6,573	774,522	6,119
1907....	2,126,594	9,350	1,003,150	17,277	293,230	7,506	830,214	6,370
1908....	2,231,181	9,680	1,048,873	18,161	307,110	7,664	875,198	6,597
1909....	2,218,280	9,423	1,032,172	17,820	308,807	7,482	877,301	6,441
1910....	2,290,331	9,510	1,062,844	18,291	313,834	7,483	913,653	6,490
1911....	2,359,335	9,586	1,151,283	18,010	405,778	8,606	802,274	5,940
1912....	2,382,674	9,536	1,160,521	18,053	410,260	8,523	811,893	5,907

TABLE 30.

NUMBER OF PASSENGER-SERVICE CARS.

Year.	United States.		Eastern District.		Southern District.		Western District.	
	Number.	Per 1,000 miles of line.	Number.	Per 1,000 miles of line.	Number.	Per 1,000 miles of line.	Number.	Per 1,000 miles of line.
1900....	34,713	180	19,104	357	3,882	118	11,727	110
1901....	35,969	184	19,807	368	4,018	120	12,144	112
1902....	36,987	185	19,993	369	4,179	121	12,815	115
1903....	38,140	186	20,342	370	4,255	121	13,543	118
1904....	39,752	187	20,960	374	4,370	121	14,422	120
1905....	40,713	188	21,287	376	4,595	124	14,831	120
1906....	42,262	190	21,853	380	4,861	127	15,548	123
1907....	43,973	193	22,520	388	5,164	132	16,289	125
1908....	45,117	196	23,096	400	5,219	130	16,802	127
1909....	45,584	193	23,141	400	5,315	129	17,128	126
1910....	47,095	195	23,230	400	5,500	131	18,365	130
1911....	49,818	208	24,974	391	6,584	140	18,260	135
1912....	51,490	206	25,709	400	6,846	142	18,935	138

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TABLE 31.

NUMBER OF FREIGHT CARS.

Year.	United States.		Eastern District.		Southern District.		Western District.	
	Number.	Per 1,000 miles of line.	Number.	Per 1,000 miles of line.	Number.	Per 1,000 miles of line.	Number.	Per 1,000 miles of line.
1900....	1,365,531	7,092	709,026	13,249	148,405	4,517	508,100	4,785
1901....	1,464,328	7,488	759,362	14,121	161,823	4,813	543,143	5,021
1902....	1,546,101	7,725	788,097	14,531	171,543	4,958	586,461	5,268
1903....	1,653,782	8,055	819,978	14,897	189,174	5,364	644,630	5,605
1904....	1,692,194	7,973	824,523	14,712	198,114	5,497	669,557	5,572
1905....	1,731,409	7,980	831,315	14,692	212,268	5,721	687,826	5,579
1906....	1,837,914	8,266	879,472	15,290	236,148	6,175	722,294	5,706
1907....	1,991,557	8,756	945,841	16,290	276,250	7,071	769,466	5,904
1908....	2,089,302	9,064	990,316	17,147	288,648	7,203	810,338	6,108
1909....	2,073,606	8,809	973,921	16,814	290,093	7,029	809,592	5,944
1910....	2,135,121	8,866	1,002,305	17,249	294,617	7,024	838,199	5,954
1911....	2,195,511	8,920	1,085,110	16,975	382,189	8,105	728,212	5,392
1912....	2,215,549	8,867	1,092,092	16,988	385,781	8,015	737,676	5,367

TABLE 32.

CAPACITY OF FREIGHT CARS—UNITED STATES.

Year.	Aggregate capacity.	Average capacity per freight car.
	(tons)	(tons)
1902	42,292,977	28
1903	48,530,281	29
1904	50,759,133	30
1905	53,255,083	31
1906	59,059,302	32
1907	67,033,324	34
1908	72,663,665	35
1909	73,137,546	35
1910	76,578,735	36
1911	81,077,028	37
1912	82,965,418	37

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TABLE 33. **NUMBER OF CARS BY CLASSES—UNITED STATES.**

Year.	Passenger.		Dining, parlor, and sleeping.		Baggage, express, and postal.		Other passenger.		Box.		Flat.	
	Number.	Per 1,000 miles of line.	Number.	Per 1,000 miles of line.	Number.	Per 1,000 miles of line.	Number.	Per 1,000 miles. of line	Number.	Per 1,000 miles of line	Number.	Per 1,000 miles of line
1900.....	24,720	128	1,245	7	7,964	41	784	4	657,053	3,412	134,594	699
1901.....	25,601	131	1,279	7	8,227	42	862	4	694,464	3,551	141,104	721
1902.....	26,145	131	1,445	7	8,469	42	928	5	727,213	3,633	147,027	735
1903.....	26,751	130	1,492	7	8,945	44	952	5	766,978	3,736	154,809	754
1904.....	27,766	131	1,586	7	9,345	44	1,055	5	782,897	3,689	147,620	696
1905.....	28,213	130	1,767	8	9,450	44	1,283	6	804,379	3,707	146,716	676
1906.....	29,110	131	1,903	9	9,892	44	1,357	6	844,936	3,800	147,900	665
1907.....	29,960	132	2,000	9	10,379	45	1,634	7	906,687	3,986	158,222	696
1908.....	30,285	131	1,991	9	10,864	47	1,977	9	950,095	4,122	160,076	694
1909.....	30,960	131	1,948	8	10,997	47	1,679	7	942,373	4,003	154,809	658
1910*....	31,675	131	2,074	9	11,524	48	1,802	7	966,603	4,014	153,958	639
1911.....	32,946	134	2,422	10	12,269	50	2,181	9	990,324	4,024	153,320	623
1912.....	33,856	136	2,505	10	12,766	51	2,363	9	1,004,030	4,019	150,898	604

Year.	Stock.		Coal.		Tank.		Refrigerator.		Other freight.		Company service.	
	Number.	Per 1,000 miles of line.	Number	Per 1,000 miles of line.	Number	Per 1,000 miles of line.	Number.	Per 1,000 miles. of line	Number.	Per 1,000 miles of line	Number.	Per 1,000 miles of line
1900.....	55,153	286	454,535	2,361	2,805	15	14,480	75	46,911	244	50,594	263
1901.....	55,665	285	517,885	2,648	2,113	11	16,136	83	36,961	189	50,536	258
1902.....	58,555	293	549,308	2,744	3,542	18	18,435	92	42,021	210	57,097	285
1903.....	61,909	302	596,622	2,906	4,430	21	21,465	104	47,569	232	61,467	299
1904.....	64,534	304	623,002	2,935	4,521	21	22,758	107	46,862	221	66,615	314
1905.....	63,407	292	632,913	2,917	5,163	24	26,847	124	51,984	240	70,749	326
1906.....	64,462	290	687,457	3,092	5,326	24	31,795	143	56,038	252	78,736	354
1907.....	70,416	310	748,123	3,289	5,974	26	33,644	148	68,491	301	91,064	400
1908.....	76,519	332	798,911	3,466	6,698	29	27,953	121	69,050	300	96,762	420
1909.....	73,661	313	792,499	3,367	6,631	28	28,210	120	75,423	320	99,090	421
1910*....	78,811	327	818,731	3,400	7,434	31	30,918	128	78,666	327	108,115	449
1911.....	77,590	315	853,719	3,469	7,787	32	31,786	129	80,985	328	114,006	463
1912.....	76,536	306	855,112	3,422	7,836	31	30,693	123	90,444	362	115,635	463

* Excludes 20 cars unclassified.

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VII. FREIGHT TRAFFIC STATISTICS.

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TABLE 34.

FREIGHT TRAFFIC MOVEMENT.

Total Freight Tonnage.

Year.	United States.		Eastern District.		Southern District.		Western District.	
	Tonnage originating on line	Per cent of total.	Tonnage originating on line.	Per cent of total.	Tonnage originating on line.	Per cent of total.	Tonnage originating on line.	Per cent of total.
	(tons)		(tons)		(tons)		(tons)	
1900	516,432,217	100.00	295,037,182	100.00	63,789,153	100.00	157,605,882	100.00
1901	521,337,833	100.00	291,121,317	100.00	67,221,211	100.00	162,995,305	100.00
1902	581,832,441	100.00	324,045,476	100.00	78,005,774	100.00	179,781,191	100.00
1903	638,800,658	100.00	344,863,942	100.00	85,854,746	100.00	208,081,970	100.00
1904	641,680,547	100.00	345,874,297	100.00	88,846,457	100.00	206,959,793	100.00
1905	715,663,442	100.00	387,987,570	100.00	93,959,210	100.00	233,716,662	100.00
1906	820,164,627	100.00	448,521,985	100.00	104,827,715	100.00	266,814,927	100.00
1907	893,184,972	100.00	481,601,404	100.00	115,580,170	100.00	296,003,398	100.00
1908	797,216,099	100.00	424,622,558	100.00	113,653,075	100.00	258,940,466	100.00
1909	826,492,765	100.00	408,649,701	100.00	120,793,459	100.00	297,049,605	100.00
1910	968,464,009	100.00	471,213,275	100.00	146,028,659	100.00	351,222,075	100.00
1911	967,233,991	100.00	493,763,010	100.00	166,984,047	100.00	306,486,934	100.00
1912	998,282,525	100.00	511,970,609	100.00	171,717,393	100.00	314,594,523	100.00
			Products of Agriculture.					
1900	53,468,496	10.35	18,067,740	6.12	5,116,961	8.02	30,283,795	19.22
1901	56,102,838	10.76	18,533,275	6.37	5,286,698	7.86	32,282,865	19.81
1902	53,723,115	9.23	17,540,131	5.41	5,934,923	7.61	30,248,061	16.82
1903	61,056,212	9.56	18,944,504	5.49	6,854,473	7.98	35,257,235	16.95
1904	61,512,543	9.59	18,791,159	5.43	6,825,965	7.68	35,895,419	17.34
1905	64,637,035	9.03	19,621,041	5.06	7,601,561	8.09	37,414,433	16.01
1906	70,201,720	8.56	21,201,316	4.73	7,879,171	7.52	41,121,233	15.41
1907	77,030,071	8.62	22,021,732	4.57	8,785,323	7.60	46,223,016	15.62
1908	69,665,943	8.74	21,372,569	5.03	8,971,647	7.89	39,321,727	15.19
1909	73,683,720	8.92	19,009,546	4.65	9,569,169	7.92	45,105,005	15.18
1910	78,736,587	8.13	20,814,209	4.42	9,913,080	6.79	48,009,298	13.67
1911	85,566,053	8.85	24,935,632	5.05	13,562,175	8.12	47,068,246	15.35
1912	90,776,489	9.09	26,041,392	5.09	14,918,163	8.68	49,816,934	15.84

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TABLE 34—Continued.

Products of Animals.

Year.	United States.		Eastern District.		Southern District.		Western District.	
	Tonnage originating on line.	Per cent of total.	Tonnage originating on line.	Per cent of total.	Tonnage originating on line.	Per cent of total.	Tonnage originating on line.	Per cent of total.
	(tons)		(tons)		(tons)		(tons)	
1900	14,844,837	2.87	6,197,118	2.10	778,692	1.22	7,869,027	4.99
1901	15,145,297	2.91	6,281,148	2.16	732,136	1.09	8,132,013	4.99
1902	15,362,410	2.64	6,651,476	2.05	775,564	1.00	7,935,370	4.41
1903	16,802,893	2.63	6,607,700	1.92	877,474	1.02	9,317,719	4.48
1904	17,576,078	2.74	7,095,626	2.05	846,256	0.95	9,634,196	4.66
1905	18,155,743	2.54	7,469,356	1.93	854,519	0.91	9,831,868	4.21
1906	19,002,825	2.32	7,457,802	1.66	906,456	0.86	10,638,567	3.99
1907	20,473,486	2.29	7,636,770	1.59	967,517	0.84	11,869,199	4.01
1908	19,635,150	2.46	7,635,961	1.80	939,489	0.83	11,059,700	4.27
1909	20,593,352	2.49	7,610,582	1.86	1,002,340	0.83	11,980,430	4.03
1910	20,294,144	2.10	7,402,683	1.57	1,083,606	0.74	11,807,855	3.36
1911	23,763,262	2.46	8,218,197	1.67	1,802,976	1.08	13,742,089	4.48
1912	24,974,171	2.50	8,894,392	1.74	2,314,127	1.35	13,765,652	4.38

Products of Mines.

1900	271,602,072	52.59	171,322,650	58.07	33,056,168	51.82	67,223,254	42.65
1901	269,372,556	51.67	166,727,728	57.27	35,142,661	52.28	67,502,167	41.41
1902	304,634,808	52.36	184,938,205	57.08	40,668,019	52.13	79,028,584	43.96
1903	329,335,621	51.56	194,426,582	56.38	42,509,407	49.51	92,399,632	44.40
1904	330,872,195	51.56	201,621,522	58.29	43,743,364	49.24	85,507,309	41.32
1905	383,562,335	53.59	228,077,198	58.78	47,987,220	51.07	107,497,917	45.99
1906	435,450,476	53.09	261,966,505	58.41	53,432,008	50.97	120,051,963	44.99
1907	476,899,638	53.39	282,559,506	58.67	57,737,415	49.95	136,602,717	46.15
1908	444,216,023	55.72	265,747,801	62.58	57,779,823	50.84	120,688,399	46.61
1909	459,560,732	55.60	256,261,843	62.71	63,050,150	52.20	140,248,739	47.22
1910	544,604,373	56.23	291,210,129	61.80	79,201,479	54.24	174,192,765	49.60
1911	539,255,980	55.75	306,754,072	62.13	90,068,704	53.94	142,433,204	46.48
1912	566,538,387	56.75	315,581,446	61.64	97,535,577	56.80	153,421,364	48.77

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TABLE 34—Continued.

Products of Forests.

Year.	United States.		Eastern District.		Southern District.		Western District.	
	Tonnage originating on line	Per cent of total.	Tonnage originating on line.	Per cent of total.	Tonnage originating on line.	Per cent of total.	Tonnage originating on line.	Per cent of total.
	(tons)		(tons)		(tons)		(tons)	
1900	59,956,421	11.61	22,642,424	7.68	12,233,843	19.18	25,080,154	15.91
1901	60,844,933	11.67	21,330,091	7.33	12,514,682	18.62	27,000,160	16.56
1902	67,703,050	11.64	22,714,109	7.01	14,548,160	18.65	30,440,781	16.93
1903	74,559,980	11.67	23,116,850	6.70	18,004,361	20.97	33,438,769	16.07
1904	80,383,577	12.53	23,200,603	6.71	19,778,852	22.26	37,404,122	18.07
1905	80,436,863	11.24	24,388,412	6.29	19,072,521	20.30	36,975,930	15.82
1906	92,187,351	11.24	26,246,855	5.85	21,695,641	20.70	44,244,855	16.58
1907	101,617,724	11.38	26,777,103	5.56	25,493,975	22.06	49,346,646	16.67
1908	90,475,081	11.35	22,955,349	5.41	24,279,663	21.36	43,240,069	16.70
1909	97,104,700	11.75	21,553,953	5.28	25,304,631	20.95	50,246,116	16.92
1910	113,010,825	11.67	23,988,412	5.09	30,561,411	20.93	58,461,002	16.64
1911	108,506,272	11.22	23,031,539	4.66	30,495,686	18.26	54,979,047	17.94
1912	100,147,471	10.03	22,964,432	4.48	28,329,316	16.50	48,853,723	15.53
			Manufactures.					
1900	69,257,145	13.41	48,746,706	16.52	7,530,373	11.81	12,980,066	8.24
1901	71,681,178	13.75	50,108,889	17.21	7,852,703	11.68	13,719,586	8.42
1902	84,289,257	14.49	58,742,998	18.13	8,494,462	10.89	17,051,797	9.49
1903	91,980,903	14.39	64,278,932	18.64	9,696,729	11.30	18,005,242	8.65
1904	86,088,583	13.41	59,199,548	17.12	10,261,415	11.55	16,627,620	8.03
1905	97,332,768	13.60	68,555,629	17.67	10,382,738	11.05	18,394,401	7.87
1906	121,458,738	14.81	85,865,077	19.15	12,198,479	11.63	23,395,182	8.77
1907	137,621,443	15.41	95,880,756	19.91	13,336,596	11.54	28,404,091	9.60
1908	104,860,269	13.15	68,605,936	16.16	12,213,459	10.75	24,040,874	9.28
1909	108,677,129	13.15	70,084,904	17.15	13,399,659	11.09	25,192,566	8.48
1910	139,678,391	14.42	90,419,841	19.19	16,302,043	11.16	32,956,507	9.38
1911	135,175,536	13.97	91,853,664	18.60	18,259,594	10.94	25,062,278	8.18
1912	139,948,653	14.02	93,951,237	18.35	18,646,669	10.86	27,350,747	8.69

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TABLE 34—Continued.

Merchandise.

Year.	United States.		Eastern District.		Southern District.		Western District.	
	Tonnage originating on line.	Per cent of total.	Tonnage originating on line.	Per cent of total.	Tonnage originating on line.	Per cent of total.	Tonnage originating on line.	Per cent of total.
	(tons)		(tons)		(tons)		(tons)	
1900	21,974,201	4.26	12,146,648	4.12	2,304,401	3.61	7,523,152	4.77
1901	21,697,693	4.16	11,532,257	3.96	2,680,449	3.99	7,484,987	4.59
1902	25,444,025	4.37	14,188,481	4.38	3,531,216	4.53	7,724,328	4.30
1903	29,949,022	4.69	15,761,549	4.57	3,786,777	4.41	10,400,696	5.00
1904	30,986,689	4.83	16,413,343	4.75	3,442,496	3.88	11,130,850	5.38
1905	30,921,538	4.32	17,245,254	4.44	3,561,354	3.79	10,114,930	4.33
1906	33,319,615	4.06	17,731,963	3.95	3,696,235	3.53	11,891,417	4.46
1907	34,718,487	3.89	17,553,982	3.64	4,987,225	4.31	12,177,280	4.11
1908	32,222,678	4.04	14,402,311	3.39	5,661,663	4.98	12,158,704	4.69
1909	33,975,628	4.11	13,539,555	3.31	4,806,660	3.98	15,629,413	5.26
1910	35,718,413	3.69	13,780,911	2.92	5,188,786	3.55	16,748,716	4.77
1911	36,519,321	3.77	15,221,958	3.08	7,495,940	4.49	13,801,423	4.50
1912	38,329,467	3.84	16,689,086	3.26	6,938,705	4.04	14,701,676	4.67

Miscellaneous—Other Commodities.

1900	25,329,045	4.91	15,913,896	5.39	2,768,715	4.34	6,646,434	4.22
1901	26,493,338	5.08	16,607,929	5.70	3,011,882	4.48	6,873,527	4.22
1902	30,675,776	5.27	19,270,076	5.94	4,053,430	5.19	7,352,270	4.09
1903	35,116,027	5.50	21,727,825	6.30	4,125,525	4.81	9,262,677	4.45
1904	34,260,882	5.34	19,552,496	5.65	3,948,109	4.44	10,760,277	5.20
1905	40,617,160	5.68	22,630,680	5.83	4,499,297	4.79	13,487,183	5.77
1906	48,543,902	5.92	28,052,467	6.25	5,019,725	4.79	15,471,710	5.80
1907	44,824,123	5.02	29,171,555	6.06	4,272,119	3.70	11,380,449	3.84
1908	36,140,955	4.54	23,902,631	5.63	3,807,331	3.35	8,430,993	3.26
1909	32,397,504	3.98	20,589,318	5.04	3,660,850	3.03	8,647,336	2.91
1910	36,421,276	3.76	23,597,090	5.01	3,778,254	2.59	9,045,932	2.58
1911	38,447,567	3.98	23,747,948	4.81	5,298,972	3.17	9,400,647	3.07
1912	37,567,887	3.77	27,848,624	5.44	3,034,836	1.77	6,684,427	2.12

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TABLE 35.

REVENUE FREIGHT TRAIN-MILES.

Year.	United States.		Eastern District.		Southern District.		Western District.	
	Number.	Per cent.	Number.	Per cent	Number.	Per cent.	Number.	Per cent.
1900*.....	492,543,526	100.0	223,918,132	45.4	66,321,282	13.5	202,329,072	41.1
1901.....	491,942,041	100.0	217,456,229	44.2	69,237,134	14.1	205,248,678	41.7
1902.....	499,711,176	100.0	216,092,360	43.2	70,684,662	14.2	212,934,154	42.6
1903.....	526,312,433	100.0	224,206,878	42.6	77,040,217	14.6	225,065,338	42.8
1904.....	535,090,971	100.0	229,044,260	42.8	79,857,548	14.9	226,189,163	42.3
1905.....	546,424,405	100.0	238,516,448	43.7	83,818,057	15.3	224,089,900	41.0
1906.....	594,005,825	100:0	257,009,827	43.3	91,536,627	15.4	245,459,371	41.3
1907.....	629,995,723	100.0	268,566,537	42.6	97,060,452	15.4	264,368,734	42.0
1908.....	587,218,454	100.0	249,772,923	42.5	90,769,104	15.5	246,676,427	42.0
1909.....	568,854,608	100.0	238,060,224	41.9	88,364,385	15.5	242,429,999	42.6
1910.....	635,450,681	100.0	265,248,045	41.7	96,367,381	15.2	273,835,255	43.1
1911.....	626,496,025	100.0	279,144,089	44.6	115,999,772	18.5	231,352,164	36.9
1912.....	612,345,112	100.0	271,567,377	44.4	116,612,893	19.0	224,164,842	36.6

* Figures for United States have been adjusted and do not check with district figures.

TABLE 36.

REVENUE MIXED TRAIN-MILES.

Year.	United States.		Eastern District.		Southern District.		Western District.	
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
1900.....	30,691,508	.....	.....	....	.....	....	.....	....
1901.....	30,978,210	.....	.....	....	.....	....	.....	....
1902.....	30,824,268	.....	.....	....	.....	....	.....	....
1903.....	31,491,647	.....	.....	....	.....	....	.....	....
1904.....	31,973,615	.....	.....	....	.....	....	.....	....
1905.....	32,189,996	.....	.....	....	.....	....	.....	....
1906.....	32,833,713	.....	.....	....	.....	....	.....	....
1907.....	32,111,134	.....	.....	....	.....	....	.....	....
1908.....	34,866,036	100.0	6,951,875	19.9	7,115,372	20.4	20,798,789	59.7
1909.....	36,236,916	100.0	6,535,212	18.0	7,697,153	21.3	22,004,551	60.7
1910.....	35,807,207	100.0	6,653,964	18.6	7,982,004	22.3	21,171,239	59.1
1911.....	36,461,466	100.0	6,929,870	19.0	8,222,609	22.6	21,308,987	58.4
1912.....	37,127,992	100.0	6,970,478	18.8	8,118,498	21.9	22,039,016	59.3

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TABLE 37.

FREIGHT TRAIN DENSITY.

(Freight train-miles per mile of line.)

Year.	United States.	Eastern District.	Southern District.	Western District.
1900	2,592	4,208	2,055	1,935
1901	2,535	4,054	2,083	1,915
1902	2,526	4,001	2,072	1,940
1903	2,596	4,103	2,205	1,989
1904	2,563	4,124	2,240	1,924
1905	2,546	4,236	2,292	1,841
1906	2,704	4,505	2,430	1,965
1907	2,801	4,647	2,511	2,058
1908	2,565	4,313	2,294	1,876
1909	2,442	4,116	2,173	1,803
1910	2,669	4,572	2,316	1,977
1911	2,573	4,571	2,604	1,678
1912	2,469	4,233	2,448	1,645

TABLE 38.

REVENUE FREIGHT CAR-MILES—ALL CARS.

Year.	United States.		Eastern District.		Southern District.		Western District.	
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
1901*	12,832,092,209	100.0	5,975,617,963	46.6	1,665,688,286	13.0	5,169,905,454	40.4
1902*	13,340,365,056	100.0	6,113,863,248	45.9	1,690,472,642	12.7	5,522,178,479	41.4
1903	14,193,718,005	100.0	6,536,035,916	46.1	1,792,958,320	12.6	5,864,723,769	41.3
1904	14,353,650,056	100.0	6,551,593,612	45.6	1,904,151,504	13.3	5,897,904,940	41.1
1905	15,082,070,763	100.0	6,880,698,604	45.6	2,049,034,099	13.6	6,152,338,060	40.8
1906	16,589,958,024	100.0	7,542,136,642	45.5	2,232,511,971	13.4	6,815,309,411	41.1
1907	17,122,259,754	100.0	7,742,063,829	45.2	2,241,013,192	13.1	7,139,182,733	41.7
1908	16,857,003,236	100.0	7,717,714,619	45.8	2,209,971,420	13.1	6,929,317,197	41.1
1909	17,169,413,224	100.0	7,723,478,795	45.0	2,341,824,367	13.6	7,104,110,062	41.4
1910	18,981,573,779	100.0	8,496,839,034	44.8	2,582,694,657	13.6	7,902,040,088	41.6
1911	19,315,156,130	100.0	9,143,129,157	47.3	3,219,128,891	16.7	6,952,898,082	36.0
1912	19,466,402,067	100.0	9,194,305,032	47.2	3,303,828,793	17.0	6,968,268,242	35.8

* Figures for United States have been adjusted and do not check with district figures.

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TABLE 39. **REVENUE FREIGHT CAR-MILES—LOADED CARS.**

Year.	United States.		Eastern District.		Southern District.		Western District.	
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
1901.....	8,889,232,684	100.0	4,059,289,140	45.7	1,145,553,302	12.9	3,684,390,242	41.4
1902.....	9,296,427,436	100.0	4,204,728,638	45.2	1,193,236,282	12.8	3,898,462,516	42.0
1903.....	9,844,158,056	100.0	4,455,496,096	45.3	1,270,249,453	12.9	4,118,412,507	41.8
1904.....	9,849,576,535	100.0	4,428,914,883	45.0	1,307,219,684	13.3	4,113,441,968	41.7
1905.....	10,278,745,467	100.0	4,611,792,089	44.9	1,389,430,858	13.5	4,277,522,520	41.6
1906.....	11,410,599,327	100.0	5,077,798,229	44.5	1,539,456,847	13.5	4,793,344,251	42.0
1907.....	12,021,325,746	100.0	5,304,694,680	44.1	1,580,286,919	13.2	5,136,344,147	42.7
1908.....	11,128,231,436	100.0	4,963,060,582	44.6	1,446,179,940	13.0	4,718,990,914	42.4
1909.....	11,360,655,079	100.0	4,963,876,962	43.7	1,533,538,356	13.5	4,863,239,761	42.8
1910.....	12,851,294,922	100.0	5,669,740,976	44.1	1,735,560,323	13.5	5,445,993,623	42.4
1911.....	12,859,386,385	100.0	5,978,777,607	46.5	2,110,888,495	16.4	4,769,720,283	37.1
1912.....	13,088,331,845	100.0	6,093,812,851	46.5	2,182,659,980	16.7	4,811,859,014	36.8

TABLE 40. **FREIGHT CAR-MILES PER FREIGHT TRAIN-MILE.**

(Cars per train.)

Year.	United States.	Eastern District.	Southern District.	Western District.
1901.....	24.5	27.5	24.1	25.2
1902.....	25.1	28.3	23.9	25.9
1903.....	25.4	29.2	23.3	26.1
1904.....	25.3	28.6	23.8	26.1
1905.....	26.1	28.8	24.4	27.5
1906.....	26.5	29.3	24.4	27.8
1907.....	25.9	28.8	23.1	27.0
1908.....	27.1	30.1	22.6	25.9
1909.....	28.4	31.6	24.4	26.9
1910.....	28.3	31.2	24.8	26.8
1911.....	29.1	32.0	25.9	27.5
1912.....	30.0	33.0	26.5	28.3

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TABLE 41.

LOADED FREIGHT CAR-MILES PER FREIGHT TRAIN-MILE.

(Loaded cars per train.)

Year.	United States.	Eastern District.	Southern District.	Western District.
1901	17.0	18.7	16.5	18.0
1902	17.5	19.5	16.9	18.3
1903	17.6	19.9	16.5	18.3
1904	17.4	19.3	16.4	18.2
1905	17.8	19.3	16.6	19.1
1906	18.2	19.8	16.8	19.5
1907	18.2	19.8	16.3	19.4
1908	17.9	19.3	14.8	17.6
1909	18.8	20.3	16.0	18.4
1910	19.1	20.9	16.6	18.5
1911	19.4	20.9	17.0	18.9
1912	20.2	21.9	17.5	19.5

TABLE 42.

TONS CARRIED ONE MILE.

Year.	United States.		Eastern District.		Southern District.		Western District.	
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
1900*	141,596,551,161	100	75,044,260,736	53.0	17,096,672,680	12.1	49,458,223,854	34.9
1901	147,077,136,040	100	75,561,728,975	51.4	17,936,876,881	12.2	53,578,530,184	36.4
1902	157,289,370,053	100	78,726,751,437	50.1	19,397,178,966	12.3	59,165,439,650	37.6
1903	173,221,278,993	100	87,046,082,562	50.2	20,935,355,077	12.1	65,239,841,354	37.7
1904	174,522,089,577	100	87,009,756,058	49.9	21,737,598,114	12.4	65,774,735,405	37.7
1905	186,463,109,510	100	93,948,925,921	50.4	23,577,646,792	12.6	68,936,536,797	37.0
1906	215,877,551,241	100	107,488,614,742	49.8	27,252,842,492	12.6	81,136,094,007	37.6
1907	236,601,390,103	100	117,961,319,632	49.8	28,815,564,501	12.2	89,824,505,970	38.0
1908	218,381,554,802	100	108,302,123,117	49.6	26,978,590,903	12.3	83,100,831,782	38.1
1909	218,802,986,929	100	106,376,498,931	48.6	28,574,158,775	13.1	83,852,329,223	38.3
1910	255,016,910,451	100	125,024,755,529	49.0	33,840,444,295	13.3	96,151,710,627	37.7
1911	253,783,701,839	100	130,834,171,530	51.6	41,712,302,738	16.4	81,237,227,571	32.0
1912	264,080,745,058	100	134,947,238,083	51.1	44,249,585,878	16.8	84,883,921,097	32.1

* Figures for United States have been adjusted and do not check with district figures.

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TABLE 43.

TON-MILES PER INHABITANT.

Year.	United States.	Eastern District.	Southern District.	Western District.
1900	1,863	2,360	1,033	1,789
1901	1,896	2,331	1,068	1,888
1902	1,986	2,383	1,139	2,032
1903	2,144	2,586	1,211	2,186
1904	2,118	2,539	1,240	2,151
1905	2,220	2,693	1,326	2,201
1906	2,522	3,027	1,512	2,531
1907	2,714	3,265	1,577	2,740
1908	2,460	2,947	1,457	2,479
1909	2,421	2,847	1,523	2,448
1910	2,773	3,292	1,781	2,748
1911	2,702	3,124	2,161	2,482
1912	2,764	3,171	2,263	2,539

TABLE 44.

AVERAGE HAUL PER TON (MILES).

Year.	Average haul per ton—United States.	Average haul per ton on the individual railway.			
		United States.	Eastern District.	Southern District.	Western District.
1900	242.73	130.87	111.03	141.08	162.37
1901	251.98	135.03	114.92	167.05	165.19
1902	239.10	131.04	109.93	160.56	162.83
1903	242.35	132.80	113.62	158.24	160.69
1904	244.30	133.23	113.69	159.57	161.07
1905	237.56	130.60	111.22	164.16	156.90
1906	240.89	132.33	110.22	166.77	161.78
1907	242.05	131.71	110.90	164.38	161.15
1908	253.94	143.83	123.43	162.95	169.61
1909	251.10	141.87	123.04	163.79	162.01
1910	249.68	138.31	120.36	164.62	158.79
1911	254.10	142.88	122.68	177.54	171.11
1912	256.87	143.44	121.87	179.40	174.24

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TABLE 45.

FREIGHT DENSITY.

(Ton-miles per mile of line.)

Year.	United States.	Eastern District.	Southern District.	Western District.
1900	735,352	1,402,277	520,415	465,761
1901	760,414	1,405,146	533,502	595,336
1902	793,351	1,451,532	560,677	531,480
1903	855,442	1,581,448	593,641	567,273
1904	829,476	1,552,554	603,169	547,388
1905	861,396	1,660,374	635,430	559,159
1906	982,401	1,868,782	712,660	640,982
1907	1,052,119	2,031,644	737,575	689,235
1908	974,654	1,875,232	673,253	626,382
1909	953,986	1,836,516	692,321	615,629
1910	1,071,086	2,151,593	806,839	682,988
1911	1,053,566	2,073,671	924,069	613,179
1912	1,078,580	2,131,165	952,994	629,131

TABLE 46.

TON-MILES PER FREIGHT TRAIN-MILE.

(Tons per train.)

Year.	United States.	Eastern District.	Southern District.	Western District.
1900	270.9	335.1	257.8	244.4
1901	281.3	347.5	259.1	261.0
1902	296.5	364.3	274.4	277.8
1903	310.5	388.2	271.7	289.9
1904	307.8	379.9	272.2	290.8
1905	322.3	393.9	281.3	307.6
1906	344.4	418.2	297.7	330.5
1907	357.4	439.2	296.9	339.8
1908	351.8	421.9	275.6	310.7
1909	362.6	434.9	297.5	317.1
1910	380.4	459.8	324.2	325.9
1911	383.1	457.2	337.4	321.7
1912	406.8	484.2	356.4	344.7

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TABLE 47.

TON-MILES PER FREIGHT CAR-MILE—ALL CARS.

(Tons per car.)

Year.	United States.	Eastern District.	Southern District.	Western District.
1901	11.5	12.6	10.8	10.4
1902	11.8	12.9	11.5	10.7
1903	12.2	13.3	11.7	11.1
1904	12.2	13.3	11.4	11.2
1905	12.4	13.6	11.5	11.2
1906	13.0	14.2	12.2	11.9
1907	13.8	15.2	12.9	12.6
1908	13.0	14.0	12.2	12.0
1909	12.7	13.8	12.2	11.8
1910	13.4	14.7	13.1	12.2
1911	13.1	14.3	13.0	11.7
1912	13.6	14.7	13.4	12.2

TABLE 48.

TON-MILES PER LOADED FREIGHT CAR-MILE.

(Tons per loaded car.)

Year.	United States.	Eastern District.	Southern District.	Western District.
1901	16.5	18.6	15.7	14.5
1902	16.9	18.7	16.3	15.2
1903	17.6	19.5	16.5	15.8
1904	17.7	19.6	16.6	16.0
1905	18.1	20.4	17.0	16.1
1906	18.9	21.2	17.7	16.9
1907	19.7	22.2	18.2	17.5
1908	19.6	21.8	18.7	17.6
1909	19.3	21.4	18.6	17.2
1910	19.8	22.1	19.5	17.7
1911	19.7	21.9	19.8	17.0
1912	20.2	22.1	20.3	17.6

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TABLE 49.

TON-MILES PER FREIGHT LOCOMOTVE.

Year.	United States.	Eastern District.	Southern District.	Western District.
1900	6,556,731	7,582,526	6,746,911	5,396,424
1901	6,439,736	7,336,803	6,522,501	5,472,781
1902	6,666,499	7,511,378	6,737,471	5,781,262
1903	6,807,942	7,734,679	7,065,594	5,810,977
1904	6,456,846	7,346,315	6,559,324	5,540,791
1905	6,690,700	7,663,045	6,792,753	5,679,398
1906	7,232,563	8,073,959	7,275,185	6,344,209
1907	7,375,585	8,383,889	6,999,166	6,465,916
1908	6,461,907	7,463,450	6,103,756	5,573,870
1909	6,424,796	7,299,060	6,421,159	5,623,522
1910	7,237,569	8,338,875	7,608,014	6,182,092
1911	6,913,259	7,975,324	6,924,884	5,681,495
1912	7,056,034	8,139,354	6,950,754	5,865,487

TABLE 50.

FREIGHT REVENUE PER MILE OF MAIN TRACK.

Year.	United States.	Eastern District.	Southern District.	Western District.
1900	$5,094	$7,307	$3,785	$4,181
1901	5,335	7,583	3,981	4,430
1902	5,612	7,959	4,223	4,683
1903	6,040	8,762	4,668	4,903
1904	6,000	8,752	4,778	4,824
1905	6,147	9,056	4,881	4,911
1906	6,765	9,930	5,360	5,446
1907	7,312	10,712	5,629	5,969
1908	6,515	9,514	5,053	5,351
1909	6,455	9,305	5,106	5,369
1910	7,239	10,747	5,775	5,885
1911	7,033	10,237	5,997	5,525
1912	7,050	10,448	6,099	5,422

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TABLE 51.

FREIGHT REVENUE PER FREIGHT TRAIN-MILE.

Year.	United States.	Eastern District.	Southern District.	Western District.
1900	$2.000	$2.106	$1.890	$2.252
1901	2.132	2.274	1.950	2.402
1902	2.271	2.437	2.091	2.525
1903	2.440	2.645	2.170	2.587
1904	2.427	2.656	2.204	2.650
1905	2.497	2.691	2.217	2.803
1906	2.608	2.794	2.303	2.921
1907	2.740	2.943	2.343	3.072
1908	2.653	2.745	2.148	2.771
1909	2.765	2.837	2.272	2.893
1910	2.862	2.969	2.418	2.940
1911	2.895	2.951	2.388	3.083
1912	3.023	3.129	2.489	3.174

TABLE 52.

AVERAGE RECEIPTS PER TON-MILE.

Year.	United States.	Eastern District.	Southern District.	Western District.
	(Cents)	(Cents)	(Cents)	(Cents)
1900	.729	.619	.720	.899
1901	.750	.646	.737	.901
1902	.757	.659	.749	.891
1903	.763	.672	.785	.877
1904	.780	.690	.797	.893
1905	.766	.672	.778	.891
1906	.748	.656	.763	.866
1907	.759	.659	.778	.884
1908	.754	.650	.772	.884
1909	.763	.652	.759	.905
1910	.753	.645	.739	.898
1911	.757	.646	.709	.960
1912	.744	.647	.700	.921

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VIII. PASSENGER TRAFFIC STATISTICS.

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TABLE 53.

REVENUE PASSENGER TRAIN-MILES.

Year.	United States.		Eastern District.		Southern District.		Western District.	
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
1900*	363,469,596	100	179,608,031	49.4	44,070,898	12.1	139,842,667	38.5
1901.	385,172,567	100	184,609,407	47.9	47,422,878	12.3	153,140,282	39.8
1902.	405,613,231	100	192,682,797	47.5	50,222,333	12.4	162,708,101	40.1
1903.	425,142,204	100	197,671,171	46.5	53,311,444	12.5	174,159,589	41.0
1904.	440,464,866	100	203,937,486	46.3	55,414,687	12.6	181,112,693	41.1
1905.	459,827,029	100	210,608,951	45.8	58,431,927	12.7	190,786,151	41.5
1906.	479,037,553	100	218,140,275	45.5	60,627,828	12.7	200,269,450	41.8
1907.	509,328,042	100	227,810,264	44.7	66,472,805	13.1	215,044,973	42.2
1908.	505,945,582	100	223,811,526	44.2	66,081,992	13.1	216,052,064	42.7
1909.	506,011,038	100	220,327,128	43.5	65,440,061	12.9	220,243,849	43.6
1910.	549,015,003	100	230,680,427	42.0	70,990,946	12.9	247,343,630	45.1
1911.	572,929,421	100	251,923,180	44.0	86,179,785	15.0	234,826,456	41.0
1912.	585,853,528	100	252,119,052	43.0	91,644,789	15.7	242,089,687	41.3

* Figures for United States have been adjusted and do not check with district figures.

TABLE 54.

PASSENGER TRAIN DENSITY.

(Passenger train-miles per mile of line.)

Year.	United States.	Eastern District.	Southern District.	Western District.
1900	1,913	3,375	1,365	1,338
1901	1,985	3,441	1,427	1,429
1902	2,050	3,568	1,472	1,483
1903	2,097	3,618	1,526	1,539
1904	2,110	3,672	1,554	1,540
1905	2,143	3,740	1,598	1,567
1906	2,181	3,824	1,609	1,603
1907	2,265	3,942	1,720	1,674
1908	2,210	3,865	1,670	1,643
1909	2,172	3,809	1,609	1,638
1910	2,306	3,976	1,706	1,786
1911	2,353	4,125	1,935	1,703
1912	2,362	3,929	1,924	1,777

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TABLE 55.

REVENUE PASSENGER CAR-MILES.*

Year.	United States.		Eastern District.		Southern District.		Western District.	
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
1908.....	1,867,984,570	100.0	797,342,014	42.7	237,174,106	12.7	833,468,450	44.6
1909.....	1,881,022,085	100.0	791,956,916	42.1	228,898,695	12.2	860,166,474	45.7
1910.....	2,048,597,509	100.0	844,731,001	41.2	252,960,278	12.4	950,906,230	46.4
1911.....	2,141,382,030	100.0	918,406,641	42.9	312,767,063	14.6	910,208,326	42.5
1912.....	2,202,843,085	100.0	924,575,686	42.0	334,429,047	15.2	943,838,352	42.8

* Covers passenger, sleeping, parlor, and observation cars.

TABLE 56.

PASSENGERS CARRIED ONE MILE.

Year.	United States.		Eastern District.		Southern District.		Western District.	
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
1900*.....	16,038,076,200	100	8,692,418,832	54.2	1,501,533,479	9.4	5,845,054,906	36.4
1901.....	17,353,588,444	100	9,150,186,139	52.7	1,682,407,708	9.7	6,520,994,597	37.6
1902.....	19,689,937,620	100	10,240,757,818	52.0	1,853,619,245	9.4	7,595,560,557	38.6
1903.....	20,915,763,881	100	10,680,784,399	51.1	1,982,549,094	9.5	8,252,430,388	39.4
1904.....	21,923,213,536	100	11,025,906,620	50.3	2,116,098,198	9.7	8,781,208,718	40.0
1905.....	23,800,149,436	100	11,532,082,456	48.4	2,375,557,054	10.0	9,892,509,926	41.6
1906.....	25,167,240,831	100	12,290,570,559	48.8	2,433,552,668	9.7	10,443,117,604	41.5
1907.....	27,718,554,030	100	13,355,148,591	48.2	2,799,169,795	10.1	11,564,235,644	41.7
1908.....	29,082,836,944	100	13,543,677,873	46.6	3,004,998,758	10.3	12,534,160,313	43.1
1909.....	29,109,322,589	100	13,249,295,220	45.5	2,907,063,864	10.0	12,952,963,505	44.5
1910.....	32,338,496,329	100	14,399,925,436	44.5	3,222,945,565	10.0	14,715,625,328	45.5
1911.....	33,201,694,699	100	15,511,763,504	46.7	4,174,646,444	12.6	13,515,284,751	40.7
1912.....	33,132,354,783	100	15,745,175,861	47.5	4,335,404,778	13.1	13,051,774,144	39.4

* Figures for United States have been adjusted and do not check with district figures.

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TABLE 57.

PASSENGER-MILES PER INHABITANT.

Year.	United States.	Eastern District.	Southern District.	Western District.
1900	211.0	273.3	90.8	211.4
1901	223.7	282.2	100.2	229.7
1902	248.6	310.0	108.8	260.9
1903	258.9	317.4	114.7	276.5
1904	266.1	321.7	120.7	287.1
1905	283.4	330.5	133.6	315.9
1906	294.1	346.1	135.0	325.8
1907	318.0	369.7	153.2	352.7
1908	327.6	368.6	162.3	373.9
1909	322.1	354.6	155.0	378.2
1910	351.6	379.1	169.6	420.6
1911	353.5	370.3	216.2	412.9
1912	346.8	369.9	221.7	390.4

TABLE 58.

AVERAGE JOURNEY PER PASSENGER (MILES).

Year.	United States.	Eastern District.	Southern District.	Western District.
1900	27.80	22.49	38.62	38.60
1901	28.58	22.78	38.41	40.29
1902	30.30	23.91	39.28	43.54
1903	30.10	23.46	40.28	43.36
1904	30.64	23.78	39.80	44.21
1905	32.21	24.26	41.08	48.10
1906	31.54	23.85	39.20	47.37
1907	31.72	24.19	40.08	45.89
1908	32.86	24.77	39.21	47.00
1909	32.85	24.68	38.20	46.51
1910	33.50	24.60	38.60	48.59
1911	33.48	25.70	35.42	50.00
1912	33.18	25.64	35.60	49.68

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TABLE 59.

AVERAGE NUMBER OF TRIPS PER INHABITANT.

Year.	United States.	Eastern District.	Southern District.	Western District.
1900	7.59	12.15	2.35	5.48
1901	7.83	12.39	2.61	5.70
1902	8.21	12.96	2.77	5.99
1903	8.60	13.53	2.85	6.38
1904	8.68	13.53	3.03	6.49
1905	8.80	13.62	3.25	6.57
1906	9.32	14.51	3.44	6.88
1907	10.02	15.28	3.82	7.69
1908	10.03	14.88	4.14	7.96
1909	9.86	14.37	4.06	8.13
1910	10.56	15.41	4.39	8.66
1911	10.62	14.54	6.11	8.26
1912	10.51	14.55	6.23	7.86

TABLE 60.

PASSENGER DENSITY.

(Passenger-miles per mile of line.)

Year.	United States.	Eastern District.	Southern District.	Western District.
1900	83,290	162,427	45,706	55,044
1901	89,721	170,157	50,040	60,287
1902	99,314	188,815	53,579	68,231
1903	103,291	194,048	56,217	71,757
1904	104,198	196,740	58,717	73,079
1905	109,949	203,808	64,023	80,240
1906	114,529	213,682	63,637	82,501
1907	123,259	230,015	71,649	88,734
1908	130,073	234,506	74,990	94,478
1909	127,299	228,740	70,435	95,098
1910	138,169	247,813	76,843	103,791
1911	139,191	251,075	92,839	102,555
1912	136,699	257,255	93,645	96,820

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TABLE 61.

PASSENGER-MILES PER PASSENGER TRAIN-MILE.

(Passengers per train.)

Year.	United States.	Eastern District.	Southern District.	Western District.
1900	41	48	34	42
1901	42	50	35	43
1902	45	53	37	47
1903	46	54	37	47
1904	46	54	38	48
1905	48	55	41	52
1906	49	56	40	52
1907	51	59	42	54
1908	54	59	41	53
1909	54	58	40	53
1910	56	61	41	55
1911	55	60	44	53
1912	53	61	44	49

TABLE 62.

PASSENGER-MILES PER PASSENGER CAR-MILE.

(Passengers per car.)

Year.	United States.	Eastern District.	Southern District.	Western District.
1908	15.6	16.9	12.7	15.0
1909	15.5	16.7	12.7	15.1
1910	15.8	17.0	12.7	15.5
1911	15.5	16.9	13.3	14.8
1912	15.0	17.0	13.0	13.8

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TABLE 63.

PASSENGER-MILES PER PASSENGER LOCOMOTIVE.

Year.	United States.	Eastern District.	Southern District.	Western District.
1900	1,626,179	1,623,841	1,351,515	1,719,640
1901	1,704,005	1,636,007	1,414,977	1,916,812
1902	1,908,310	1,874,224	1,491,246	2,103,451
1903	1,978,786	1,932,125	1,717,980	2,122,539
1904	1,948,384	1,896,767	1,802,469	2,058,900
1905	2,048,558	1,941,101	2,025,198	2,196,383
1906	2,054,636	1,983,310	1,914,676	2,184,296
1907	2,163,146	2,132,048	1,952,001	2,260,406
1908	2,171,106	2,136,227	2,016,778	2,331,937
1909	2,152,907	2,108,082	1,913,801	2,349,531
1910	2,321,744	2,266,991	2,135,815	2,537,614
1911	2,268,097	2,280,275	2,053,487	2,321,320
1912	2,271,544	2,316,977	2,019,054	2,302,259

TABLE 64.

PASSENGER REVENUE PER MILE OF MAIN TRACK.

Year.	United States.	Eastern District.	Southern District.	Western District.
1900	$1,567	$2,492	$1,068	$1,170
1901	1,670	2,593	1,167	1,282
1902	1,819	2,825	1,220	1,423
1903	1,897	2,925	1,320	1,486
1904	1,927	2,940	1,375	1,524
1905	1,996	2,966	1,471	1,614
1906	2,096	3,132	1,515	1,701
1907	2,256	3,267	1,692	1,876
1908	2,231	3,227	1,645	1,874
1909	2,168	3,107	1,525	1,871
1910	2,365	3,353	1,658	2,070
1911	2,401	3,350	1,826	2,049
1912	2,365	3,369	1,856	1,965

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TABLE 65.

PASSENGER REVENUE PER TRAIN-MILE.

Year.	United States.	Eastern District.	Southern District.	Western District.
1900	$0.890	$0.896	$0.803	$0.912
1901	.912	.916	.835	.932
1902	.969	.970	.850	1.004
1903	.992	1.001	.887	1.013
1904	1.009	1.002	.914	1.045
1905	1.028	.998	.958	1.082
1906	1.065	1.038	.988	1.118
1907	1.109	1.058	1.028	1.187
1908	1.121	1.068	1.036	1.201
1909	1.114	1.052	1.001	1.210
1910	1.147	1.092	1.021	1.234
1911	1.148	1.099	1.054	1.235
1912	1.127	1.117	1.033	1.174

TABLE 66.

AVERAGE RECEIPTS PER PASSENGER-MILE.

Year.	United States.	Eastern District.	Southern District.	Western District.
	(Cents)	(Cents)	(Cents)	(Cents)
1900	2.003	1.847	2.329	2.152
1901	2.013	1.846	2.331	2.166
1902	1.986	1.822	2.278	2.135
1903	2.006	1.851	2.342	2.126
1904	2.006	1.828	2.367	2.142
1905	1.962	1.795	2.319	2.071
1906	2.003	1.814	2.403	2.131
1907	2.014	1.782	2.407	2.188
1908	1.937	1.750	2.261	2.062
1909	1.928	1.742	2.234	2.050
1910	1.938	1.742	2.229	2.067
1911	1.974	1.779	2.160	2.139
1912	1.987	1.782	2.176	2.172

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TABLE 67.

PASSENGER SERVICE TRAIN REVENUE PER TRAIN-MILE.

Year.	United States.	Eastern District.	Southern District.	Western District.
1900	$1.011	$1.076	$1.003	$1.149
1901	1.027	1.098	1.040	1.157
1902	1.085	1.157	1.057	1.228
1903	1.116	1.197	1.095	1.243
1904	1.141	1.208	1.129	1.284
1905	1.160	1.205	1.178	1.320
1906	1.203	1.257	1.213	1.358
1907	1.258	1.277	1.248	1.446
1908	1.271	1.267	1.135	1.331
1909	1.270	1.256	1.103	1.341
1910	1.304	1.302	1.120	1.368
1911	1.309	1.308	1.162	1.365
1912	1.291	1.331	1.153	1.305

TABLE 68.

PASSENGER SERVICE TRAIN REVENUE PER MILE OF MAIN TRACK.

Year.	United States.	Eastern District.	Southern District.	Western District.
1900	$1,926	$2,994	$1,334	$1,474
1901	2,039	3,107	1,454	1,592
1902	2,204	3,371	1,517	1,740
1903	2,302	3,497	1,631	1,823
1904	2,349	3,545	1,699	1,872
1905	2,425	3,579	1,808	1,969
1906	2,547	3,791	1,869	2,066
1907	2,737	3,944	2,053	2,286
1908	2,717	3,948	1,997	2,275
1909	2,656	3,822	1,880	2,279
1910	2,873	4,112	2,025	2,493
1911	2,920	4,100	2,216	2,479
1912	2,887	4,129	2,257	2,392

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BUREAU OF RAILWAY ECONOMICS

Established by Railways of the United States
for the Scientific Study of Transportation Problems

FRANK HAIGH DIXON
CHIEF STATISTICIAN

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STATISTICIAN

The Arguments For and Against Train-Crew Legislation

(Revision of Consecutive No. 53)

Consecutive No. 73
Miscellaneous Series No. 18
WASHINGTON, D. C.
1915

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BULLETINS OF THE BUREAU OF RAILWAY ECONOMICS

MONTHLY BULLETINS

Consecutive Number.	Monthly Report Series.	Summary of Revenues and Expenses of Steam Roads in the United States for—
1.	1.	July, 1910.
2.	2.	August, 1910.
3.	3.	September, 1910.
5.	4.	November, 1910 (Preliminary Bulletin).
7.	5.	October, 1910.
8.	6.	November, 1910.
9.	7.	December, 1910.
10.	8.	January, 1911.
12.	9.	February, 1911.
13.	10.	March, 1911.
14.	11.	April, 1911.
16.	12.	May, 1911.
19.	13.	June, 1911.
20.	14.	July, 1911.
22.	15.	August, 1911.
25.	16.	September, 1911.
26.	17.	October, 1911.
27.	18.	November, 1911.
29.	19.	December, 1911.
30.	20.	January, 1912.
32.	21.	February, 1912.
33.	22.	March, 1912.
35.	23.	April, 1912.
36.	24.	May, 1912.
37.	25.	June, 1912.
38.	26.	July, 1912.
40.	27.	August, 1912.
41.	28.	September, 1912.
42.	29.	October, 1912.
43.	30.	November, 1912.
44.	31.	December, 1912.
46.	32.	January, 1913.
47.	33.	February, 1913.
48.	34.	March, 1913.
49.	35.	April, 1913.
50.	36.	May, 1913.
51.	37.	June, 1913 (Out of Print).
52.	38.	July, 1913.
54.	39.	August, 1913.
55.	40.	September, 1913.
56.	41.	October, 1913.
57.	42.	November, 1913.
58.	43.	December, 1913.
59.	44.	January, 1914.
60.	45.	February, 1914.
61.	46.	March, 1914.
63.	47.	April, 1914.
64.	48.	May, 1914.
65.	49.	June, 1914.
67.	50.	July, 1914.
68.	51.	August, 1914.
69.	52.	September, 1914.
70.	53.	October, 1914.
71.	54.	November, 1914.
72.	55.	December, 1914.
74.	56.	January, 1915.

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The Arguments For and Against Train-Crew Legislation

Revision of Consecutive Number 53

Bureau of Railway Economics
WASHINGTON, D. C.
March, 1915

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MAR 22 1915

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PREFATORY NOTE.

In 1913 the Bureau of Railway Economics issued Bulletin No. 53, entitled "The Arguments for and against Train-crew Legislation." There has been a large demand for this bulletin, and as such legislation continues to be sought by the Brotherhood of Railroad Trainmen and to be opposed by the railways and other interests, it seems desirable to revise the bulletin and bring the information in it up to date.

Following the defeat of the train-crew law in Missouri by a referendum vote of the people, referred to on page 40, the Brotherhood has been advocating in some States train-limit bills as substitutes for train-crew bills. Instead of prescribing the minimum number of men that shall be employed on trains containing specified numbers of cars, these new bills, by one kind of provision or another, fix the maximum length of trains. In some cases they provide that freight trains shall not contain more than 50 cars; in other cases, that freight trains shall not be more than a half mile in length, and so on.

Practically all of the arguments which have been advanced against train-crew legislation apply with equal or greater force to train-limit legislation. There are also strong arguments against train-limit legislation which do not apply to train-crew legislation. Among the effects which it is obvious would be produced by train-limit legislation are the following:

1. It has been chiefly for the purpose of enabling them to haul longer and heavier trains that the railways have made large expenditures to reduce the grades and curvatures in their main track, and to build long passing tracks and yard tracks. The investment for these purposes is now irretrievably made and the fixed charges on it must be paid, while legislation limiting the length of trains would prevent the reduction of operating expenses which the investment was made to obtain.

2. The various improvements which have been made in the appliances used on trains, and which are mentioned in the following pages, such as improvements in brakes, couplings, etc., have had the purpose and effect of enabling the railways to op-

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erate long trains with crews containing a given number of men as safely and efficiently as they could formerly operate short trains with the same number of men. The advantages derived from these improvements would be greatly reduced if the number of cars handled in trains should be limited as proposed.

3. Great increases have been made in the tractive power of locomotives for the purpose of enabling the railways to haul longer trains. These increases in tractive power have been obtained at the expense of an increased cost per locomotive. Obviously, the increases in tractive power would become valueless if legislation compelled the hauling of trains lighter and shorter than the locomotives have been built to haul. Furthermore, legislation limiting the number of cars that could be hauled by each locomotive would make it necessary to buy and operate more locomotives, thus increasing both the fixed charges and the operating expenses of the railways.

4. Legislation which restricted the length of trains would make it necessary to increase the number of trains run in order to handle the business. This would compel the railways to employ more men of every class directly or indirectly concerned with train operation, whereas the train-crew legislation forces them to employ only extra brakemen. Therefore, the increase in expenditures for labor caused by such legislation would be much greater than that caused by train-crew legislation.

5. Train-limit legislation, like train-crew legislation, is being advocated nominally in the interest of safety. But, as has been shown, limitation of the length of trains would necessitate the running of more trains; and an increase in the number of trains run, without a corresponding increase in trackage and all other facilities, would, for obvious reasons, increase rather than decrease the hazards of operation. If, in order to prevent the increase in the number of trains from causing an increase in the number of collisions and other accidents, additional tracks, signals, and so on were provided, the result would necessarily be a further increase in investment, fixed charges and operating expenses.

It is clear, therefore, that the proposed train-limit legislation would tend to increase rather than reduce the hazards of railway operation, and that it would increase both fixed charges and operating expenses all along the line.

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INTRODUCTION.

Within recent years, numerous bills to regulate the number of men that railways must employ in their train crews have been introduced in the State legislatures and in Congress. These measures are commonly known as "full-crew bills." They specify, sometimes the number of men that must be employed on passenger trains; sometimes the number of men that must be employed on freight trains; sometimes the number that must be employed in switching service, and sometimes the number that must be employed in all of these classes of service. Such measures have become laws in twenty States, namely, Arizona, Arkansas, California, Connecticut, Indiana, Maine, Maryland, Mississippi, Nebraska, Nevada, New Jersey, New York, North Dakota, Ohio, Oregon, Pennsylvania, South Carolina, Texas, Washington, and Wisconsin. In some cases they merely require the employment of the number of men that it is customary for the railways to employ, existing practice not being affected. In at least twelve States these laws compel the employment of additional men. Within the last six years, nine bills have been presented in Congress, each of which would have compelled the employment of more men; but no federal train-crew law has yet been enacted.

The first efforts to secure train-crew legislation date back a number of years, and these efforts have been continued with great energy and perseverance. For example, a bill was introduced in the Massachusetts Legislature in 1902 and defeated. It was again introduced in 1903 and 1904 and defeated in both years. It reappeared in 1908. On this occasion the legislature referred the whole matter to the State Railroad Commission for investigation. The commission, after inquiry, reported that if the officers of the railways would see that the provisions of the Standard Code of operating rules were enforced, and make some changes in methods locally, legislation would be unnecessary. The bill was again introduced in 1909 and defeated. It was again introduced in 1912, and this time was passed by both houses.

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Governor Foss vetoed it; whereupon an unsuccessful attempt was made to pass it over his veto. Later, the Board of Railroad Commissioners issued several recommendations regarding the manning of trains, with which all the roads at once complied.

Both State and federal bills have been introduced from time to time at the instance of railway labor organizations, the chief promoter of such legislation being the Brotherhood of Railroad Trainmen. The legislative representatives of these organizations have repeatedly announced that their members would vote against law-makers who did not support the measures they demanded. Many members of the Brotherhood itself have not favored, or have been opposed to, the proposed legislation. But opposition on their part is now stopped by a resolution of the Brotherhood to the effect that its members cannot sign petitions against labor legislation, "nor interfere with the work of their legislative representatives, without violating the law of the Brotherhood, which would mean expulsion for the offending party."[1]

The labor brotherhoods and the members of state legislatures and of Congress who have favored such legislation have advocated it chiefly on the ground that the employment of more men in train service is necessary to the safety of railway employees and passengers. Such legislation has been opposed by officers of the railways, by many commercial and agricultural organizations, and by many members of State legislatures and of Congress on the ground that it does not increase the efficiency or safety of railway operation or otherwise benefit the public, and hence that it does add unnecessarily to railway expenses. Therefore railway managers have in several cases urged State governors to veto such measures. In New York and Missouri the governors, notwithstanding earnest protests from railway officers, signed the bills as passed by the legislatures and issued statements indicating their belief that they would promote safety and were therefore in the public interest.[2] On the other hand, Governor Sulzer's two immediate predecessors, Governors Hughes and

[1] From "The Railroad Trainman," the official publication of the Brotherhood of Railroad Trainmen, for May, 1913, p. 465.

[2] In Missouri the railroads circulated a referendum petition, and secured enough signatures to have the measure submitted to a vote of the people. As shown elsewhere herein, the law was defeated by a majority of more than two to one by the voters at the election in November, 1914. See page 40.

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Dix, vetoed train-crew bills that had been passed by the New York legislature. Governor Cruce of Oklahoma, Governor Foss of Massachusetts, and Governor Harmon of Ohio also have vetoed similar bills on the ground that general legislation requiring the railways to employ additional men on trains was undesirable. But in all except Massachusetts and Oklahoma subsequent enactments have been approved. A number of State legislatures have also refused to pass train-crew bills: among these are the legislatures of Colorado, Delaware, Florida, Georgia, Illinois, Iowa, Kansas, Kentucky, Louisiana, Michigan, Minnesota, Montana, New Hampshire, New Mexico, North Carolina, South Dakota, Tennessee, Utah, Virginia, West Virginia, and Wyoming.

In a movement concerning which there is such wide diversity of opinion it is desirable that there should be the fullest information as to the views both of those who advocate and of those who oppose such legislation. In the following pages there is presented the history and present status of train operation, out of which has grown the demand for "full-crew" legislation, the provisions of the measures enacted and proposed, the expense resulting from the legislation already passed as estimated by the railways, the estimated expense of proposed legislation, and a discussion of the effect of such legislation upon the efficiency and safety of transportation.

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CHANGING CONDITIONS OF TRAIN OPERATION.

Until within a comparatively recent time trains were ordinarily made up at the point of origin by the same employees who subsequently handled them on the road. The trainmen switched the cars into place, coupled them, and did all the work necessary to prepare the train for its run, including the inspection of its condition before starting. Cars were coupled to each other and to the engine by the link and pin couplers. Brakemen had to carry links and pins to supply couplers lacking them, and to carry those unused back to the caboose or engine. Coupling was effected by hand, for which purpose the employees had to go between the cars. Trains were controlled entirely by hand-brakes, which had to be worked from the tops of freight cars and from the platforms of passenger cars. Practically all trains rendered local as well as through service—that is, they not only carried through traffic between large terminals, but also stopped at stations along the line to put off and take on goods or passengers. When a car was taken out of a train or taken into a train at one of these local stations, it was necessary to use the hand-brake in the switching needed to make the requisite changes. The work of trainmen at that time was hard and hazardous. The number of cars in a train was considerable. More than thirty years ago, before the introduction of air-brakes, it was the custom of many railways to handle regularly freight trains of forty cars or more with two brakemen. That is, the crew of a freight train, aside from employees on the engine, usually consisted of a conductor and two brakemen. The labor of controlling the train exposed the brakemen to all kinds of weather and involved strenuous physical exertion, for the application of hand-brakes sufficient to hold a train often required both strength and quickness of action. The brakemen had to spend most of their time on the tops of the cars, which in winter were often slippery with ice. Going between cars to couple by hand necessarily involved danger, so that accidents to trainmen were numerous. Passenger cars were heated by wood and coal stoves, which it was the brakemen's duty to take care of.

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Development of Air-brakes and Automatic Couplers.

In 1868, the first successful application of air-brakes to passenger trains was made. In July, 1886, and in May, 1887, the Master Car Builders Association held a series of competitive trials, with the result that the air-brake was found to be as adaptable to freight trains as to passenger trains. Its use in freight service was thereafter rapidly extended.

The principle of the air-brake is simple. Cylinders under each car are filled with compressed air, which, when released, rushes into adjoining cylinders, where, through connecting mechanism, it forces brake-shoes upon the wheels, thus bringing the train to a stop. These cylinders are supplied with air by a continuous line of air-pipe and hose leading from the locomotive. Application of the brakes is thus effected by the engineer. Moreover, any disconnection of the train line at any place in its length, as when a train breaks in two, automatically applies the brakes. There are also "conductors' valves" in each passenger car, and in the caboose of each freight train, by means of which the brakes may be applied.

In 1887, the Master Car Builders Association, after several years of investigation, recommended a standard type of automatic coupler. In 1890 the type that had become known as the "Master Car Builders' Freight Coupler" was recognized as standard by the railroad companies of the United States through their official organization, the American Railway Association. In order, however, to compel the adoption of a standard type of coupler by all of the railways of the United States, federal legislation was enacted. In 1893 the Railway Safety Appliance Act was adopted. This law provided that after January 1, 1898, it should be unlawful for any common carrier to use in interstate commerce any car "not equipped with couplers coupling automatically by impact, and which can be uncoupled without the necessity of men going between the ends of the cars." It also provided that it should be unlawful for any carrier to use in interstate commerce any locomotive "not equipped with the power driving wheel brake, and appliances for operating the train-brake system, or to run any train in such traffic after said date that has

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not a sufficient number of cars in it so equipped with power or train brakes that the engineer on the locomotive drawing such train can control its speed without requiring brakemen to use the common hand-brake for that purpose." The law was amended in 1903 to provide that at least 50 per cent of the cars in a train should be controlled by air-brakes applied from the engine, and the Interstate Commerce Commission was authorized from time to time, after full hearing, to "increase the minimum percentage of cars in any train required to be operated with power or train brakes which must have train brakes used and operated as aforesaid." The commission subsequently increased to 75 per cent the proportion of cars in a train on which power brakes must be operative, and on September 1, 1910, raised this minimum to 85 per cent.

In consequence of these requirements, the use of automatic couplers and train brakes has become practically universal in the United States. For the fiscal year ending June 30, 1912, 99.05 per cent of the locomotives and cars were fitted with train brakes and 99.67 per cent with automatic couplers. Today it is exceptional for a train to have any cars that are not equipped with air brakes.

These improvements in equipment have had a far-reaching effect upon the work of railway trainmen. The engineer of a train, whether passenger or freight, is now its real brakeman and, save under exceptional conditions, sets and releases the brakes from his cab on the engine. The "brakemen," so called, seldom have anything to do with the brakes except on detached cars during switching operations. Indeed, the term "brakeman" is now a misnomer and is being displaced in railway usage by the term "trainman." The general substitution of the automatic coupler for the old link and pin has changed the character of the trainman's work in coupling and uncoupling and has very greatly diminished the hazard. Indeed, railway managers claim that, if the trainmen comply with their instructions, the hazard is eliminated entirely. Formerly, when coupling cars, the brakeman had to stand between the cars at the moment of their coming together in order to guide the link into its place. This entailed great risk of having his hand crushed, as well as of being thrown down and run over. Now, any necessary adjustment of the coup-

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ler can be made, and ought to be made, before the cars are put in motion to effect the coupling. Formerly, when uncoupling. the brakeman had to stand between the cars to remove the pin. Now, the pin that locks the coupling can be removed by a rod extending to the side of the car. Thus during neither the coupling nor the uncoupling does the trainman need to stand between the cars. These changes apply to both freight and passenger cars. How greatly they have reduced the hazard of coupling and uncoupling cars is indicated by the following table:

CASUALTIES TO TRAINMEN FROM COUPLING ACCIDENTS 1890 AND 1913.

Year.	Total number of trainmen.	Total killed.	Total injured.	Number killed for each 10,000 trainmen.	Number injured for each 10,000 trainmen.
1890.....	153,235	265	6,073	17	396
1913.....	339,600	184	3,293	5	97

In addition to the changes in their work directly resulting from the introduction of air-brakes and automatic couplers, there have been other modifications in the duties of trainmen which may be briefly noted. In the first place, the train crew as a rule no longer makes up and inspects the train at terminals. Switching crews now make up all trains at all important points of origin and, after they have been inspected by inspectors employed for that purpose, deliver them to the train crew ready for operation. The train crew has no more to do with the preparation for the run than to test the brakes. At the end of the run the train crew has only to deliver a train to the switching crews, which separate the cars for further disposition. It may also be noted that the work and responsibility of freight conductors en route has been lightened by the present practice whereunder a yard clerk furnishes them a statement of the cars in the train, with the respective destinations, from which the conductors check off each car as it is set out and to which they add other cars as they are picked up. Formerly, the conductors had to prepare these statements of the cars composing the trains.

Again, the trainman's duties on passenger trains are less arduous because passenger trains are now almost universally heated with steam or hot water from the engine, and the trainman has only to regulate the degree of heat. The gradual displacement of the oil lamp by gas and electric lighting has relieved the trainman of many former duties.

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Increase in Trainloads.

Coincident with the development of safety appliances on trains, there has been a steady and rapid increase in the length and load, particularly of freight trains. Generally speaking, transportation is conducted most economically when traffic is handled in the largest units. The larger the loads per car and per train, the less the relative investment that must be made in roadway, track, and equipment, and the less the relative expenditures that must be made for maintenance of way and equipment, and for conducting transportation.

Faced with steadily increasing expenditures for wages, materials, and taxes, with revenues from the transportation of freight and passengers not increasing at nearly the same rate as expenses, the railways have found it necessary to practice economies in operation. The greatest economies have been secured by increasing the number of tons hauled per train, and by increasing the amount of traffic handled in proportion to the number of men employed. The extent to which, in their efforts to handle traffic economically, the railways of the United States have increased their trainloads is indicated by the fact that the average number of tons per train in this country in 1890 was 175; in 1900, 271, and in 1912, 407. In the region of heaviest traffic, that comprising in general the States of New York, Pennsylvania, New Jersey, Delaware, and Maryland, the average number of tons per train increased from 218 in 1890 to 502 in 1910. On some lines the average trainload exceeds 1,100 tons; trainloads of minerals ranging from 3,000 to 5,000 tons are not uncommon, and sometimes a train has as many as 6,000 tons. These heavy increases in trainloads have been effected very largely by increasing the capacity of cars and their loading, and by increasing the number of cars in a train. The average capacity of a freight car in this country increased from 28 tons in 1902 to 37 tons in 1912. Loaded freight trains often contain 50 to 75 cars, and trains containing even larger numbers of empty cars and exceeding a half mile in length are run not infrequently in some parts of the country.

There has been no such corresponding increase in the length of

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passenger trains, although passenger trains on main lines are somewhat longer than they were in past years. Often 12 to 16 and even more cars are pulled by a single engine; the passenger cars have increased in size and especially in weight.

With this increase in car loading and train loading there has been a decrease in the number of men required to handle a given amount of traffic. It has not, however, been accompanied by a decrease in the total number of trainmen, for, as is shown later, their number increased from 1901 to 1912 at a greater rate than the car mileage or the train mileage.

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TRAIN CREWS UNDER PRESENT CONDITIONS.

Passenger Service.

The number of men employed on passenger trains varies with conditions. On many local trains containing only two or three cars the crew behind the engine consists merely of the conductor, acting also as baggagemaster, and one man who serves as brakeman or flagman.

In the South many two-car trains are run with crews behind the engine consisting of a conductor, brakeman, and negro porter, the conductor or the brakeman acting as baggagemaster. Another combination in the South consists of a conductor, a messenger who takes care of both baggage and express, and a porter. In this case, the baggagemaster serves as flagman.

Throughout the country on trains of four or five cars, the crew customarily includes conductor, baggagemaster, brakeman or flagman, and frequently a porter; there are additional brakemen for trains with greater numbers of cars. The brakemen on passenger trains announce stations, help the passengers as they get on and off, set switches, load and unload baggage, look out for hot boxes and other defects, and flag. When there are both a porter and a flagman or a brakeman and a flagman, as is the case on most main-line passenger trains, the flagman's sole duty is to flag and to set switches behind the train.

The object of many of the legislative enactments affecting train crews in passenger service is to require the employment on every passenger train, whatever its length, in addition to the men on the engine, of at least a conductor, a baggagemaster, and a brakeman or flagman; and to require still other men on trains exceeding certain specified lengths. For example, a bill introduced in Congress in 1909 provided that the crew of a passenger train having three cars or less must include a conductor, a baggagemaster, and a brakeman. This would have made it necessary to add a baggagemaster on many short branch-line trains carrying at present only a conductor and a brakeman; and in many cases in the South either to add a brakeman or to substitute a brakeman for the porter. The same bill provided that the crew, on trains of three

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cars or more, include at least a conductor, a baggagemaster, and two brakemen. This would have made necessary the employment of an additional man on many trains. The law in Nevada requires two brakemen on trains of three or more cars; the laws in New Jersey, Oregon, Pennsylvania, Washington, and Wisconsin, on trains of four or more cars; the law in Indiana, on trains of five or more cars, and the law in Nebraska, on trains of six or more cars. Under the New Jersey law there must be at least six trainmen on every train containing a baggage car in addition to four or more passenger cars, and under the New York law every train of five or more cars having a baggage car must have a baggageman in addition to the engineer, fireman, conductor, and two brakemen.

These laws prescribe the number of trainmen according to the number of cars in the train. But the necessity or occasion for having more rather than fewer trainmen is not necessarily determined by the number of cars. A great many trains carry Pullman cars, on which there are Pullman conductors and porters to assist passengers and to look after the heating and lighting and ventilation of their respective cars. In such cases, there is no need for as large a regular train crew as in the case of trains of the same length carrying no Pullmans. And yet the laws make no allowance for the service of the Pullman porters. Such laws appear especially illogical in the case of trains composed exclusively of Pullman cars.

Freight Service.

Modern freight trains are roughly divided into two classes—through freight trains and local freight trains. The broad distinction is that through trains ordinarily run from terminal to terminal with little or no work en route in picking up or setting out cars or in delivering or receiving freight at intermediate points, while local trains make numerous stops at intermediate local stations to receive and deliver freight, switching cars at such stations when necessary. The difference in the service not only expedites the movement of traffic, but is more economical from an operating standpoint.

On a through freight train there are usually five men—an engineer, fireman, conductor, and two brakemen—one of the brake-

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men sometimes being called a "flagman." At the point of origin the train, made up and ready for its run, is delivered by a switching crew to the train crew. The place of one of the brakemen is on the engine; the other goes into the caboose with the conductor. The ordinary duties of the forward brakeman are to transmit signals from the conductor to the engineer and to open switches in front when it is necessary for the train to go on a siding at a meeting point. The ordinary duties of the rear brakeman are to flag at the rear end of the train when it stops and to close switches behind the train when it has gone on a siding. In an emergency caused, for example, by a draw-bar pulling out or the air-hose parting, the conductor may need the direct assistance of one of the brakemen. In that case the rules require the rear brakeman to flag the rear of the train and the fireman to flag the front of the train, while the forward brakeman assists the conductor. In these very rare cases, the fireman may be used to protect the front of the train, because at such times he is not performing any other duties. As already indicated, there is ordinarily a valve in the caboose by which, in case of emergency, the brakes can be set by any one who is in the caboose; or if anything goes wrong with the apparatus, the brakes on all cars are at once set automatically. Failures in the braking apparatus that cannot be promptly remedied on the spot are ordinarily due to something that has happened in or to the engine. In this case the train moves slowly and under control to the next station, where it is held until another engine is supplied.

In addition to the air-brakes, all freight cars are still equipped with hand-brakes. These hand-brakes are not worked by employees on through freight trains in the ordinary course. They are resorted to only in case the air-brakes fail, or under especial conditions, such as going down steep grades. When hand-brakes are used on such heavy grades as, for example, on some parts of the New York Central lines, it is the usual custom to employ three or more brakemen on through freight trains. On some roads under similar circumstances a mechanical device known as a "retainer" is used to supplement the air-brake, but even then where the grades are severe extra brakemen are usually employed. As a general rule, the duties of brakemen on through trains, between terminals in non-mountainous territory, are confined to

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throwing switches, flagging, and assisting the conductor in examining the running gear. On arrival at the terminal, the signal lamps are put away and the caboose locked up by the train crew, and the train is turned over to the regular yard switching crew.

While it is the general custom to employ two brakemen on a through freight train, it is usual to employ three or more brakemen on a local freight train, notwithstanding that local trains have fewer cars. This is not to serve the need for safety, but to expedite the service. Local trains set out and pick up cars at way stations, and load and unload a great deal of less-than-carload freight. Hence there is much switching to be done and much handling of freight at way stations, and the additional brakemen are ordinarily necessary that the trains may not be unduly detained. Similarly, three brakemen are usually employed on a train switching cars to and from industrial tracks. It is only in these cases when cars are being switched that brakemen are obliged to go on the top of cars to operate hand-brakes. When a train is under way the third brakeman has no particular duties or station, but frequently rides in the caboose with the conductor and rear brakeman.

So far as freight-train service is concerned, the purpose of train-crew legislation usually is to require the railways to employ at least three brakemen on a through freight train. As has been said, it is standard practice to employ at least two brakemen on every through train and at least three brakemen on every local train. Following is a list of the States in which laws have been passed requiring three brakemen on trains and specifying the minimum number of cars to which this requirement shall apply: Arkansas and Washington, 25 cars or more; New York, 26 cars or more; Maryland, New Jersey, and Pennsylvania, 30 cars or more; Arizona and Oregon, 40 cars or more; California, Nevada, and Indiana, 50 cars or more; North Dakota, 46 or more cars. The bills that have been introduced in Congress usually have required three brakemen on every train containing 25 cars or more.

Here, again, it will be seen that the laws prescribe the number of trainmen on the basis of the number of cars in the train. From what has just been said of the character of the work to be done on through and local trains, it is evident that the number of cars in a train is not the logical basis for the determination of the size of the train crew.

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EFFECTS OF TRAIN-CREW LEGISLATION.

Increase in Operating Expenses.

It is obvious that an increase in the number of men in a train crew means an increase in the operating expenses and, unless accompanied by a corresponding increase in the traffic per train or in rates, means a decrease in net operating revenues. The railways are reporting to the Special Committee on Relations of Railway Operation to Legislation careful estimates of the additional expense resulting from operating legislation already enacted. On January 26, 1915, the Committee made public the following compilation of replies received by it from 166 railways, operating 204,610 miles of line, regarding the expense caused them in the fiscal year ended June 30, 1914, by legislation, both Federal and State, affecting operation:

COST OF LEGISLATION AFFECTING RAILWAY OPERATION—SUMMARY OF REPLIES OF 166 RAILWAYS, OPERATING 204,610 MILES.

FEDERAL AND STATE LAWS.	COST OF COMPLIANCE. Year ending June 30, 1914.	Total to June 30, 1914.	Amount necessary to complete (estimated).
Hours of service	$5,013,345	.....	.....
Full (extra) crew	4,051,533	.....	.....
Boiler inspection	4,141,051	.....	.....
28-hour stock law	247,119	.....	.....
Semi-monthly pay-day	826,586	.....	.....
Safety appliance	$5,965,926	$23,845,436	$19,588,408
Postal car requirements	890,907	4,391,531	3,129,670
Ash pan	86,818	2,017,562	165,073
Headlight	1,002,840	2,635,294	624,966
Caboose	597,206	949,029	2,614,406
Jim Crow	29,623	659,380	1,468
Other enactments	2,785,850	12,852,649	96,684,127
Specific orders, State Commissions	3,065,179	.....	.....
Total	$28,703,983	$47,350,881	$122,808,118

	Number Killed.	Persons Injured.	Total.	Property Damage.
Collisions where third brakeman was employed, year ending June 30, 1914	30	641	702	$411,228

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It will be seen that the total expense caused by operating legislation in the fiscal year 1914 to the railways reporting was $28,703,983. This would pay a return of 5 per cent on an investment of $574,000,000. The total expense caused by the extra-crew laws was $4,051,533. This would pay 5 per cent on an investment of over $80,000,000. This estimate applies to the expense to the railroads on account of train-crew laws enacted in only a limited number of States. The full effect can be seen only from estimates that apply on account of all such laws to all the railways in the United States. Four train-crew bills were introduced in Congress in 1909 and 1910. The Special Committee on Relations of Railway Operation to Legislation made inquiries early in 1910 of all the railways as to the cost to them of complying with these Federal bills, if enacted, as well as the expense they were being put to on account of State legislation then in force in 13 States. The following table is a summary of the replies received:

ESTIMATE OF 1910.	Number.	Mileage.	Amount of additional annual cost of compliance with full-crew bill.
Roads replying	166	205,547	$18,328,302.32
Estimated for other roads exclusive of Canadian and Mexican roads	126	23,254	1,953,336.00
Total	292	228,801	$20,281,638.32

Another bill was introduced in Congress in 1912 which required that on each freight train containing 25 or more cars the crew should consist of at least an engineer, a fireman, a conductor, and three brakemen, "regardless of any modern equipment of automatic couplers and air-brakes." This bill made no reference to passenger-train crews. As a result of inquiries made of the railways by the Special Committee on Relations of Railway Operation to Legislation, in connection with this proposed Federal law, the following compilation was made from the replies received from 143 operating companies:

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ESTIMATES OF COST, IN 1912, OF TRAIN-CREW LAWS FURNISHED BY 143 OPERATING COMPANIES OPERATING 195,049 MILES.

Trains affected by State laws then in effect, per annum	678,661 *a*
Additional trains affected by proposed Federal law in States then having full-crew law, per annum	468,483
Trains affected by proposed law in States then having no full-crew law, per annum	3,211,056
Total trains affected by State laws and proposed Federal statute, per annum	4,358,200
Cost of compliance with State laws then in effect, per annum	$1,797,589.94 *a*
Additional cost of compliance with proposed law in States then having full-crew law, per annum	1,342,237.17
Cost of compliance with proposed law in States then having no full-crew law, per annum	10,255,790.66
Total cost per annum of compliance with State laws and proposed statute	$13,395,617.77

a Does not include States where laws were passed subsequent to 1911.

It should not be overlooked that this expense is only a part of the total increase in operating expenses that has been caused by legislative requirements imposed upon railroad operation. Such further legislation includes laws requiring 8-wheel cabooses in place of 4-wheel cabooses, laws limiting the hours of service, requiring electric headlights, requiring the installation of improved safety appliances, regulating the stops of passenger trains, the speed of stock and freight trains, requiring the abolition of grade crossings, or the installation of additional watchmen at crossings, requiring double track, and providing for days off at the company's expense. Quite independent of the question of the defensibility of these laws is the fact that they add greatly to the expense of railway operation, which must eventually find expression in higher charges to the public than would otherwise be made.

However, the fact that such train-crew legislation increases operating expenses is not a conclusive argument against it. The legislation, presumably, is intended to promote the interest of the public, and the question at issue is whether there are benefits directly or indirectly conferred on the public, and, if so, are they commensurate with the expense incurred.

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ISSUES INVOLVED IN TRAIN-CREW LEGISLATION.

In order that the arguments in favor of train-crew legislation may be fairly presented, it is desirable to give the fullest consideration to any statement from an authoritative source. To this end a thorough search has been made throughout the existing body of railway literature, throughout the reports of hearings before Committees of Congress and State legislatures, and throughout recent issues of *The Railroad Trainman*, the official organ of the Brotherhood of Railroad Trainmen. An effort was made to secure reports of hearings before State legislatures also, but without success, except in the cases of Kansas and Virginia. All the arguments containing definite statements why extra crew legislation should be enacted can be found in a statement by W. G. Lee, President of the Brotherhood of Railroad Trainmen, quoted in the *Metropolitan Magazine* for June, 1913, and in a statement made by A. A. Roe, who represented the Brotherhood of Railroad Trainmen at a hearing held in 1911 by a committee of the Kansas legislature.

Mr. Lee's statement is as follows:

"The necessity for such legislation arose out of the practice of the railway companies reducing the number of men to an extent considered unsafe by the employees. Some years ago certain railways reduced the number of freight trainmen to one, whose duty was to flag, leaving the work of running and looking after the train to the conductor.

"Further necessity (for such legislation) arose through increased tonnage and fewer men employed, which was made possible through safety appliances and heavier equipment. The railways assumed the position that as trainmen no longer had to control trains by hand-brakes they were unnecessary. The heavier demands that increased tonnage placed upon trainmen in other ways were not considered. On the majority of our railways freight trains are composed of from 50 to 100 cars—they are from half a mile to a mile in length. Such trains must be carefully inspected at water tanks and other stops. They require extra care in handling, particularly in crossing over to permit superior class trains to pass. If switching is to be done, and less than three men are employed, it leaves this work to be done by one man under conditions most dangerous to himself and the traveling public, particularly when the work is done at night.

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"Railway companies have forced men to work under unsafe conditions, with the result that hundreds are disabled or killed every year. Our Brotherhood paid one claim for every sixty-seven members in the year 1912, which is evidence that train service is most hazardous.

"The statement is made that extra men have not prevented wrecks. No one can speak advisedly on this subject. Wrecks that are prevented do not figure in the statistics.

"Railway managers rest their case on the statement that full-crew legislation will not prevent wrecks. Employees, speaking from daily experience, contend that it will make wrecks less frequent than they otherwise would be, and that it will increase the personal safety of employees and of the public. Managers argue that such legislation would put an unnecessary cost on the public. Employees point to the fact that every six minutes, day and night, year after year, one of their number is killed or injured. In the name of humanity they ask from the State the protection denied them by the companies."

This statement by the official head of the trainmen's organization appears to contain two definite points: 1. The adoption of safety appliances and the increase in trainload has resulted in a reduction of the number of trainmen relative to the work to be done. 2. This reduction in the number of trainmen has increased the risk both to the trainmen and to the public and consequently the number of casualties in train service.

In his argument before the committee of the Kansas legislature, Mr. Roe specifically disclaimed that the efforts to obtain train-crew legislation were prompted by any desire to secure a reduction in the work performed by any trainman, or that if enacted it would result in any such reduction in their work. He based his argument entirely upon the ground of safety, stating that there are occasions when an additional man is needed to ensure the accurate and prompt transmission of signals between the conductor and the engineer, and that there are occasions when the protection of the rear of the train requires an additional man.

In the argument that an additional man is sometimes needed to transmit signals he instanced cases where in the absence of such a man there might be an accident, but did not cite any specific accident as having been due to this cause. His examples to show the need of another man to protect the rear of the train were no more concrete, and he admitted that there was no work for an additional man to do when the train was running between stations.

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Number of Trainmen for Work Performed.

It is difficult to present any official statistics that will determine with absolute accuracy the relation of the number of trainmen to the work performed. It has already been noted that it is at present an almost universal practice to employ at least a conductor and two trainmen on through freight trains. It has also been indicated that it is the general custom to employ at least three brakemen on local freight trains, which are almost the only trains whose crews do switching en route. Even in this service, according to the contention of the railways, a third brakeman is employed to expedite business, and not because he is needed in the interest of safety. The fireman can, when necessary in emergency, flag the front of the train and the flagman the rear, leaving the conductor and forward brakeman to perform the switching.

In the case of through trains it is difficult for the railways to discover any duties for a third brakeman that could not be performed easily by other members of the crew. One duty frequently suggested, but not mentioned by Mr. Lee in his statement in the *Metropolitan Magazine*, is that a third brakeman is needed to ride on the top of the train. Except on mountain grades, where a third brakeman is provided, he is not needed on top of the train to manipulate the hand-brakes; and even although he might possibly at times be useful in that position to transmit signals to the engineer, it is the experience of operating officers that no discipline has yet been devised sufficiently severe to keep him there. It is an uncomfortable and dangerous position, and the brakeman naturally prefers the comfort and companionship of the caboose.

In this connection Mr. Lee voices the complaint that the longer trains and heavier equipment have increased the responsibility of trainmen in the inspection of the trains when stops are made at coaling and water stations. It has already been noted that the train crews no longer make the careful and detailed inspection of cars at the terminals before setting out upon their run. This work is now done by special employees at the terminals. But each train crew is required to keep a lookout en route for such

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faulty conditions as hot boxes, broken couplers, broken brake-gear, and the like. The rules governing such observation of the train differ on different roads. But, in a general way, the requirement is that whenever trains stop at coaling and water stations the trainmen shall examine the train for the purpose of detecting any such defects. Sometimes, when the conditions are favorable, or when the occasion requires a more careful observation, the forward brakeman walks down one side of the train while the conductor or a rear brakeman walks up the other side until they are directly opposite to each other. They then cross over, and the rear brakeman inspects the other side to the rear of the train in going back to the caboose, while the forward brakeman looks over the other side to the front of the train in going back to the engine. But the ordinary conditions of train operation do not require such an examination. It is not necessary, except after a train has undergone some special strain, as when passing over a heavy grade, or making an uncommonly fast run, or when it is about to be placed under some such unusual stress. The customary practice is for the forward brakeman to watch the train as it pulls by, then to climb on the caboose and walk over the train to the engine, continuing the examination as he goes.

It is conceivable that additional men in the crew could reduce the time and labor required for the more careful examination first described, or could permit it to be made in a greater number of cases. But opportunities for such observation in the case of through trains are few because the stops are infrequent, and the number of men always on local trains is sufficient to make any needed examination. Therefore, the practical effect of a larger crew upon the number or the carefulness of these so-called "inspections" of trains on the road would be very small.

The following table, drawn from the annual statistical compilations of the Interstate Commerce Commission, is presented for the purpose of showing as accurately as possible for the years between 1901 and 1912 the relation of the increase in the number of trainmen to the increase in work performed. The term "trainmen" as here used includes enginemen, firemen, conductors, and all other operating men employed on trains; the term "other trainmen" as here used includes all trainmen except enginemen, firemen, and conductors. It is impracticable to separate men em-

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ployed in passenger service from those employed in freight service; hence the train mileage shown is total train mileage, both passenger and freight, in revenue service. It is impossible to secure passenger-car mileage from the reports to the commission for 1901, and therefore it has been necessary to use the freight-car mileage alone. In view of the fact that the statistics are presented merely to show a tendency, the conclusions drawn are not disturbed by the slight degree of non-comparability.

	1901.	1912.	Increase.	Per cent of increase.
Total train-miles, revenue service.	908,092,818	1,236,758,715	328,665,897	36.19
Freight car-miles, revenue service.	12,832,092,209	19,466,402,067	6,634,309,858	51.70
Total number trainmen	209,043	318,329	109,286	52.28
"Other trainmen"	84,493	137,067	52,574	62.22

These statistics show that while train-miles have increased over 36 per cent between 1901 and 1912, and freight-car miles less than 52 per cent, the number of trainmen employed has increased over 52 per cent, and of "other trainmen," largely brakemen and flagmen, 62 per cent. It has already been noted that the number of trainmen in proportion to the tonnage handled has decreased. But, since the trainmen's work is with cars and trains, rather than with tons carried, car-miles and train-miles are a much better index of the amount of their work. On that basis, while the data given do not absolutely prove that the number of trainmen has increased more rapidly than the work to be performed by them, it would seem to be a fair conclusion that Mr. Lee's contention that railways have reduced the number of their trainmen relative to the work to be done is not sustained.

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TRAIN-CREWS AND ACCIDENTS.

Accidents to Trainmen During the Year 1914.

In order to reach a conclusion as to whether accidents to trainmen have increased in recent years as a result of more economical methods of operation, it is desirable in the first place to analyze, so far as the statistics will permit, the causes of accidents to trainmen. In the first place, Mr. Lee's statement that the Brotherhood of Trainmen paid one claim for each 67 members in 1912 is apt to be misleading. It implies that this proportion of claims was due to accidental causes; but a check of this statement based on all available data shows that of the claims paid in 1912 no less than 48 per cent were ascribed to natural causes and only 52 per cent to accidental causes. Based on the average membership for the year, the claims paid that were due to accidental causes thus numbered only one for each 129 members.

In Connection with Train Operation.

Turning to the official statistics of the Interstate Commerce Commission, the following table, compiled by the accident division, shows the casualties to trainmen classified according to the causes, as reported by the railways in their monthly returns to the commission. These statistics are for the fiscal year ending June 30, 1914. They are divided into two parts—those relating to casualties in connection with train operation, but not resulting from accidents to trains, and the other covering casualties directly due to train accidents.

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TABLE I.

CAUSES OF ACCIDENTS TO TRAINMEN DURING FISCAL YEAR 1914.

I. *Casualties in connection with train operation, but not in train accidents.*	Trainmen.		Trainmen in yards.		Yard trainmen.		Total.	
	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.
Being struck or run over by engine or car at stations or yards	43	90	69	189	112	347	224	626
Being struck or run over by engine or car at other places	71	68	...	...	5	3	76	71
Falling from cars or engines	156	2,023	54	1,206	130	2,520	340	5,749
Coupling or uncoupling	46	665	45	457	72	1,516	163	2,638
Getting on or off cars or engines	30	2,994	15	1,653	31	3,282	76	7,929
While doing other work about trains (not in shops or engine-houses) or while attending switches	41	12,077	24	4,465	42	6,645	107	23,187
Coming in contact while riding on cars with overhead bridges, tunnels, or any fixed structure above or at side of track	51	605	12	276	18	562	81	1,443
Other accidents on or around trains not here mentioned	..	5	...	2	...	8	...	15
Accidents to railway or bridges not causing derailments, such as fires, floods, landslides, explosions, etc.	...	...	...	...	...	1	...	1
Being struck or run over by engine or car at highway grade crossings	...	...	...	...	...	...	...	...
Other causes	4	33	2	25	1	32	7	90
Total	442	18,560	221	8,273	411	14,916	1,074	41,749
II. *Casualties in train accidents.*								
Collisions	128	1,031	29	445	46	435	203	1,911
Derailments	159	1,221	9	107	20	213	188	1,541
Bursting of, or defects in, locomotive boilers or boiler attachments	8	380	1	97	...	125	9	602
Accidents to trains, cars, or engines, except collisions, derailments, and boiler explosions	1	89	...	12	2	14	3	115
Total	296	2,721	39	661	68	787	403	4,169
Grand total	738	21,281	260	8,934	479	15,703	1,477	45,918

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It will be seen that a large proportion of the accidents to trainmen were due to their being struck or run over by engine or car, falling from cars or engines, coming in contact with overhead or lateral obstructions, or that they occurred while trainmen were getting on or off cars or engines. Of the total casualties in 1914, 54.0 per cent of those that were fatal and 34.4 per cent of those entailing injury were so caused.

While it is conceivable that an indirect connection might be shown between some of these accidents and a supposedly insufficient number of employees on the train, such a connection seems remote and cannot be established by any existing information. It does not seem clear that an increase in the number of employees would tend to reduce such accidents as these. Rather might it be assumed that an increase in the number of trainmen would tend to increase the number of such accidents. For example, if a third brakeman on freight trains were required to ride on the top of the train, it is fair to assume that there would be an increase in the number of brakemen killed and injured by falling from cars or coming in contact with lateral or overhead obstructions. An increase in the number of trainmen would not, of course, reduce the casualties resulting from fires, floods, landslides, or explosions.

This conclusion seems to be well supported: An analysis of the causes of accidents to trainmen from general causes in connection with train operation indicates little or no possibility that larger crews would reduce the risk of accident to trainmen.

In Connection with Train Accidents.

Turning to train accidents proper, the important causes are collisions and derailments. The Interstate Commerce Commission makes the following classification of the causes of derailments occurring in 1914:

	Number
Derailments due to defects in roadway, etc.	1,888
Derailments due to defects of equipment	4,186
Derailments due to negligence of trainmen, signal men, etc	426
Derailments due to unforeseen obstructions of track, etc	318
Derailments due to malicious obstruction of track	58
Derailments due to miscellaneous causes	1,689
Total	8,565

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Out of the 8,565 derailments reported, only 426, the number attributed to "negligence of trainmen, signal men, etc.," can be specifically connected with the train crews. The language used by the commission does not imply that any of these derailments could be attributed to too few men in train crews. It rather implies that they were due to the "negligence" of those who were so employed. It is of course conceivable that defects in equipment might have been noted and derailments avoided had the crew been larger; but this is an assumption which cannot be sustained by any evidence that has been found.

As to collisions, the Interstate Commerce Commission said in its annual report for 1912:

"The most disquieting and perplexing feature in the problem of accident prevention is the large proportion of train accidents caused by dereliction of duty by the employees involved. By far the greatest number of our serious train accidents are due to the failure of some responsible employee to perform an essential duty at a critical time. The seriousness of this problem is indicated by the fact that of the 81 accidents investigated up to September first, 52, or more than 63 per cent of the whole number, were caused by mistakes on the part of employees. These 52 accidents comprise 48 of the 49 collisions investigated and 4 of the 31 derailments. They caused the death of 248 persons and the injury of 1,309 persons. Of the 48 collisions caused by errors of employees, 33 occurred on roads operated under the train-order system and 15 occurred under the block system. The most numerous failures were by trainmen or enginemen. These were disobedience of orders; disobedience of signals; failure to keep clear of superior trains; improper flagging; and failure to control speed at dangerous points. Such lapses were responsible for 41 of the accidents investigated."

There is no indication in this statement that the commission believed that the collisions or other accidents investigated were due to an insufficient number of train employees, yet in all fairness it must be noted that the statement of causes is not sufficiently complete or thorough to permit the positive statement that none of these accidents would have been avoided had the train crews been larger.

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Accidents to Trainmen from 1901 to 1914.

In connection with Mr. Lee's assertion that casualties to trainmen are in part due to the insufficient size of the train crew, and his implication that casualties are increasing, it is of interest to examine the statistics of casualties to trainmen from 1901 to 1914, classified by their causes, here shown in Table II. These statistics compiled by the Interstate Commerce Commission are not wholly comparable, as certain changes have been made in the classification of accidents during the period. Moreover, the statistics from 1901 to 1910 are taken from the annual reports of the railways to the commission, while those for 1911 to 1914 are from the summary of the monthly reports of accidents, annual reports of accidents having been abandoned in 1910. Because of the fact that for the last four years here presented the reports are made by the railways to the commission monthly instead of annually, and because the inspection of accidents has been more rigorous, the statistics for these last four years have doubtless been more complete; this will probably account, in considerable part, for the striking increases in the number injured. The fact that the larger number of casualties to trainmen are due to causes which have little, if any, relation to the number of men employed has already been discussed. This table simply emphasizes the fact by showing the same situation for 14 successive years. It should be noted, further, that while the number of injuries considerably increased from 1901 to 1904, they then did not vary greatly year by year until 1911, when they again appear to increase (due in part, as already noted, to more complete reports). The number of deaths, taking the period as a whole, was about the same for each year.

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TABLE II.

CASUALTIES TO TRAINMEN, 1901-1914.

Year.	Collisions and derailments.		Coupling and uncoupling.		Falling from and jumping on or off trains, locomotives and cars.		Struck by trains, locomotives or cars.		Overhead obstructions.		All other causes.		Total.	
	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.
1901	464	2,508	163	2,377	441	5,130	255	574	48	457	166	5,669	1,537	16,715
1902	534	3,350	141	2,475	449	6,502	256	739	78	664	216	7,773	1,674	21,503
1903	648	4,526	211	3,023	541	7,324	367	824	82	656	221	9,323	2,070	25,676
1904	613	4,337	269	3,506	573	8,683	357	920	75	840	227	10,989	2,114	29,275
1905	579	4,736	217	3,316	526	8,443	365	866	59	839	244	11,653	1,990	29,853
1906	693	5,245	266	3,590	584	10,024	428	931	82	1,042	257	14,157	2,310	34,989
1907	776	6,273	272	4,062	644	11,394	475	1,171	91	1,017	279	16,838	2,537	40,755
1908[1].....	480	4,759	198	3,116	516	10,280	358	902	72	914	218	15,850	1,842	35,821
1909[1].....	389	3,159	137	2,271	379	8,568	243	577	47	775	149	13,768	1,344	29,118
1910[1].....	500	4,296	174	2,826	442	10,407	363	924	55	875	189	16,513	1,723	35,841
1911[2].....	480	4,241	198	2,898	451	11,902	302	682	71	1,454	206	19,831	1,708	41,008[2]
1912[2].....	468	4,695	185	3,164	465	12,849	305	713	69	1,472	171	21,082	1,663	43,975[2]
1913[2].....	446	4,813	184	3,293	463	14,916	329	800	80	1,781	198	25,390	1,700	50,993[2]
1914[2].....	391	3,452	163	2,638	416	13,678	300	697	81	1,443	126	24,010	1,477	45,918[2]

1 Does not include accidents reported by switching and terminal companies.

2 Data for these last four years are more exact and more complete than for previous years. This fact alone would cause an apparent increase in the number of casualties. It will be noted that from the year 1904 to 1910 the number of casualties fluctuates about a fairly constant level. As pointed out in the text, the large number of the casualties to trainmen are due to causes which have little or no connection with the number of trainmen employed.

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During the twelve years, 1902-1914, the Interstate Commerce Commission investigated directly through its own agents 1,570 train accidents, which were responsible for the death of 3,897 persons, or about one-third of the total number killed in such accidents during this period, and the injury of 22,932 persons, or over one-eighth of the total number injured in such accidents during this period.

The following tabulation shows the causes to which the commission attributed these 1,570 train accidents:

CAUSES OF PRINCIPAL TRAIN ACCIDENTS ON RAILWAYS OF UNITED STATES, FISCAL YEARS 1902 TO 1914, INCLUSIVE.

	Number.	
Fault of train crew other than brakemen:		
Disobedience of rules or orders	82	
Misread orders	70	
Excessive speed	150	
Carelessness	112	
Failure to heed signal	78	
Ran past meeting point	38	
Forgetfulness	49	
Asleep	40	
Failure to follow schedule	25	
Intoxication	5	
Other errors	1	
Total		650
Fault of brakemen:		
Failure to flag	73	
Improper flagging	39	
Failure to set brakes	40	
Other errors	6	
Total		158
Fault of dispatchers, operators, etc.:		
Wrong orders	91	
Failure to deliver orders	72	
Switch misplaced	64	
Wrong signal	62	
Other errors	4	
Total		293
Fault of other employees		19
Mechanical defects:		
Defective or weakened track	81	
Defective or weakened equipment	103	
Failure of air-brakes	30	
Failure of block signals	4	
Total		218

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Hostile weather conditions	69
Malicious interference with track or equipment	41
Parting of trains	11
Miscellaneous causes	37
Causes uncertain or unknown	74
Total	1,570

Again, it may be said that, while the commission attributes none of these accidents to an insufficient number of men, yet it is clear that the commission does not follow the causes to their ultimate source, and hence it cannot be claimed that these statistics alone demonstrate that none of these accidents were due to an insufficient train force.

Accidents to Long Freight Trains.

The argument that more than two brakemen should be employed on long through trains in the interest of safety implies that these trains are more liable to accidents than short local trains with three brakemen, and that the third brakeman should be employed on through trains to reduce this liability. In this connection may be quoted statistics compiled by C. W. Kouns, general manager of the Atchison, Topeka & Santa Fe Railway's eastern lines, presented to the Joint Railroad Committee of the House and Senate of the Kansas Legislature last winter. Mr. Kouns said:

"For the purpose of aiding an understanding, these reports have been divided to show the number of accidents occurring to trains having more or less than 25 cars.

"The Missouri, Kansas & Texas report, covering three divisions, shows 2,718 trains run. Of this number, there were 79 accidents to trains carrying more than 25 cars and 119 to trains carrying less than 25 cars. In other words, under the first item there was one accident to every 345 trains, while the second shows one accident to every 179 trains.

"On the Union Pacific, in Kansas, during January, 1913, there were five accidents; all to trains having less than 25 cars. There were 873 such trains, so that the rate was one for each 175 trains run. They ran during the same period 644 trains with over 25 cars without accident.

"On the Atchison, Topeka & Santa Fe, from August, 1912, to January 31, 1913, there were 19,407 trains run with 25 cars or

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less. There were 128 accidents to these trains, or one to every 152 trains run. There were 22,348 trains run with more than 25 cars. There were 123 accidents to these trains, or one to each 182 trains run.

"A significant fact in connection with these accidents is, that while a large per cent of the smaller trains were equipped with an additional man, 61 of the 128 accidents were due to errors of employees. On the heavier trains, and greater total number run, there were but 44 due to that cause.

"The Chicago, Rock Island & Pacific, reporting for six months ending December 31, 1912, shows 56 accidents to trains having less than 25 cars, or one for each 103 trains run, and 88 accidents to trains having more than 25 cars, or one for each 122 trains run.

"They also show a much larger number of accidents due to errors of employees on the smaller trains than the large ones; the figures being 54 on the smaller and 17 on the larger trains."

While the available evidence is not finally destructive of the claim that a number of the accidents in train service is due to the employment of too few men, yet the presumption from all the evidence is so strongly to the contrary that it throws the burden of proof upon those who make the statement. Thus far they have presented no specific evidence in support of their contention.

On the other hand, it is the unanimous opinion of railway operating officers that an increase in the number of men normally employed on trains will tend to increase the number of accidents not only to individual employees, but to the trains themselves. It will either result in a dangerous division of responsibility or else in an idle and unnecessary man becoming a hindrance to other employees in the performance of their duties. Replies received in 1909 by the Special Committee on Relations of Railway Legislation to Operation from railways operating in states where train-crew legislation had been passed were unanimous in expressing the view that no duties were performed by the extra man on a train that could not be performed by the other employees. It was, moreover, the unanimous opinion that the legislation did not and would not increase safety, while many expressed the opinion that it was bound to have the opposite effect.

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Accidents to all Persons.

Larger train crews are urged, not only in behalf of the safety of trainmen, but also for the further reason that they would increase the safety of the traveling public and of railway employees other than trainmen. With respect to that claim, an analysis of the causes of accidents to railway employees, passengers, trespassers, and other persons in 1914 is shown in Table III. It will be seen that more than half of the casualties to passengers are due to collisions and derailments, which have been considered. As to the other casualties, there is no indication that the size of the train crew was a factor in their cause.

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TABLE III.

Causes of Accidents to all Persons Sustained in Connection with Trains, Fiscal Year 1914.

I.	Employees on duty.		Employees not on duty.		Passengers.		Trespassers.		Other persons not trespassing.		Total.	
Casualties in connection with train operation, but not in train accidents.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.
Being struck or run over by engine or car at stations or yards	661	1,482	130	125	41	133	1,238	1,245	106	291	2,176	3,276
Being struck or run over by engine or car at other places	471	432	113	59	6	2	2,796	1,351	78	98	3,464	1,942
Falling from cars or engines	384	6,065	16	44	48	317	438	621	12	94	898	7,141
Coupling or uncoupling	171	2,692	....	2	....	....	....	....	....	....	171	2,694
Getting on or off cars or engines	113	8,498	38	326	69	2,788	590	1,990	9	140	819	13,742
While doing other work about trains (not in shops or engine-houses) or while attending switches	107	23,265	....	....	....	....	....	....	....	....	107	23,265
Coming in contact while riding on cars with overhead bridges, tunnels, or any fixed structure above or at side of track	89	1,490	3	5	5	29	46	100	1	2	144	1,626
Other accidents on or around trains not here mentioned	52	1,884	2	204	7	4,103	47	426	17	837	125	7,454
Accidents to railways or bridges not causing derailments, such as fires, floods, landslides, explosions, etc.	....	10	....	....	....	....	3	....	....	2	3	12
Being struck or run over by engine or car at highway grade crossings	....	....	11	15	....	....	122	119	1,014	2,801	1,147	2,935
Other causes	23	200	9	200	4	748	116	324	61	1,562	213	3,034
Total	2,071	46,018	322	980	180	8,120	5,396	6,176	1,298	5,827	9,267	67,121
II.												
Casualties in train accidents.												
Collisions	224	2,250	2	74	38	3,426	16	39	7	87	287	5,876
Derailments	211	1,820	3	38	46	3,512	56	135	2	56	318	5,561
Bursting of, or defects in, locomotive boilers or boiler attachments	11	630	....	4	....	....	1	....	....	1	12	635
Accidents to trains, cars, or engines, except collisions, derailments, and boiler explosions	6	123	....	1	1	63	2	4	....	4	9	195
Total	452	4,823	5	117	85	7,001	75	178	9	148	626	12,267
Grand total	2,523	50,841	327	1,097	265	15,121	5,471	6,354	1,307	5,975	9,893	79,388

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Train-crew Legislation as Affecting the Provision of Safety Appliances.

There is another side to this question of the effect of full train-crew laws on safety. If it be admitted that train-crew legislation is unnecessary, it must then be granted that such legislation not only will not promote safety, but may by reason of its expense be an actual obstruction in the way of the development of greater safety of the railways of the country. The Interstate Commerce Commission has frequently called attention to the need for physical improvements. In its annual report for 1912 it directed attention to conditions of track and equipment that lead to derailments, and recommended the universal installation of the block system as a means of reducing collisions. The improvement of track and equipment and the installation of block-signal systems and other physical improvements can be made only by the investment of a large amount of capital. As has been shown, the railways estimate that train-crew legislation applying throughout the country would increase railway expenses to the extent of from $13,000,000 to $20,000,000 per year. The former amount is the annual interest at 5 per cent on $260,000,000; the latter on $400,000,000. It has been estimated by the Special Committee on Relations of Railway Operation to Legislation that for $260,000,000 block-signal systems could be installed on all railway mileage of the United States not now so equipped—in other words, train-crew legislation would cost the railroads at least as much as the universal installation of the block-signal system.

Railway officers contend that net earnings are insufficient even now to enable them to make these needed physical improvements. On this point the Block Signal and Train Control Board created by Congress to investigate appliances for the promotion of safety of railroad operation, in its final report to the Interstate Commerce Commission, on June 29, 1912, said:

"In discussing this subject it may be assumed at the outset that railroad officers and employees are as anxious to do everything in their power to promote safety as the public is to have safeguards provided, and that railroad officials and employees are not immune to the horrors of a terrible wreck. If all think alike and have the same desire, why are not better safeguards provided? The general answer for most railroads is the expense involved. Money is not available with which to provide and install the apparatus; it is needed elsewhere."

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STATE ACTION ON TRAIN-CREW LEGISLATION.

Repeal of Missouri's Train-crew Law by Referendum.

One of the most interesting and significant events that has occurred in the course of the struggle for and against train-crew legislation was the overwhelming defeat of the Missouri train-crew law by a referendum vote of the people at the general election in November, 1914.

The legislature passed the train-crew law in January, 1913. It required an extra man on all freight trains having more than 40 cars. The railways speedily decided to appeal from the legislature to the voters themselves. A petition was, therefore, circulated, and the necessary signatures being secured, the law was submitted to the people on the referendum ballot. The Brotherhood of Railroad Trainmen had secured the passage of the law, and it now spared no effort to prevent its being nullified by the people. The railways also carried on an energetic campaign. The official returns disclosed the remarkable fact that the law was defeated by more than two to one, the vote for it being 159,593, and the vote against it, 324,085. A majority against it was returned in no less than 102 out of the 116 counties in the State; and even in St. Louis, which the Brotherhood confidently expected to carry, it was beaten by a majority of 18,417. This is the only case where the question of train-crew legislation has been fully and squarely presented to the people themselves.

Connecticut Commission's Condemnation of Train-crew Regulation.

An attempt was made to secure the passage of a train-crew law in Connecticut in 1913. The legislature referred the matter to the Public Utilities Commission, with instructions to make a full investigation. The commission rendered a report on November 26, 1914, in which it condemned arbitrary requirements concerning the number of men that should be employed in train crews, and said it had been unable to find a single case where the

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failure of a railway to employ enough men on a train had caused an accident. The commission said in part in its report:

"The facts brought out in the present investigation disclosed no instances of the jeopardizing of the safety of either the public or employees which increased train crews would prevent. It is the belief of this commission that, of all the railroad accidents attended by fatalities which have been reported to and investigated by it, not one has been attributable to an insufficiency in number of the train crew involved.

"It is not always practical in any line of business of considerable magnitude to maintain a sufficient force over and above that required for the regular and ordinary business, to meet the possible requirements of unexpected emergencies and conditions. At such times there devolves upon all loyal and faithful employés, as well as upon the employer, a moral duty and obligation to perform in addition whatever service is reasonably possible to save human life and to protect property.

"Any added or financial burden imposed upon the railroads under Federal or State control, both as to rates and operations, must ultimately and necessarily be borne by the patrons of such company, and the interests of such patrons, as well as the interest of the railroad and its employees, should be taken into consideration."

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TRAIN-CREW LEGISLATION VETOED BY GOVERNORS.

In conclusion, there are appended messages accompanying vetoes of train-crew bills by Governor Cruce of Oklahoma, in 1913, and Governor Hughes of New York, 1907; and extracts from veto messages of Governor Dix of New York, 1911, and Governor Foss of Massachusetts, 1912.

Governor Cruce's Veto Message—1913.

"I have studied this bill from every angle, and the more I have studied it the more I have become convinced that it should not receive my approval. In the enactment of this bill it is only the railway companies and their employees that have been considered. The thousands of people in this State who travel upon the railroads and ship their products and merchandise over same have not entered into the discussion. This fact, however, must remain after all has been said, that every dollar of expense placed upon railway corporations in Oklahoma will ultimately be paid by those who patronize the railroads. The cost of putting this bill into operation is estimated by the corporation commission at something like $250,000, while the cost is estimated by the railroad companies at more than $400,000. But whether it be $100,000 or $500,000, that amount in the end will be paid by those who use the railroads. Another thing I have learned to believe is that those who have made a lifetime study of railroad operations are better judges of the proper method of operating them than I am, and I believe that this is equally true when applied to a majority of the members of any legislative body. The trouble in Oklahoma is and has ever been that in dealing with public-service corporations we have assumed to know more about how properly to operate them than those who have given the matter careful study. Public-service corporations need to be regulated and need to be controlled. Oklahoma has undertaken to do this by the creation of a corporation commission, and has clothed that commission with unusual authority in dealing with such matters. That commission, after having studied this question, is better able to place suitable regulations upon the railroads than is the governor or the legislature.

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"The practical effect of this bill would be to give employment to a number of railroad men without increasing the efficiency of the service, and would be supplying positions for three men to do the work that can be done by two. It is in entire harmony with the principle that has prevailed in this State of creating an army of officials to do the work that ought to be done by half that number of men. This legislature has set itself to the task of reducing the number of officials drawing salaries from the State, and a Herculean task it is proving. It is certainly inconsistent, while trying to curtail the number of useless public officials, to increase the number of appointed employees, who in the end must draw their subsistence from the same source that is now drawn upon by these useless public employees."

Governor Hughes' Veto Measure—1907.

"I return herewith, without my approval, Assembly Bill No. 455 (Senate Reprint No. 1338), entitled 'An act to better protect the lives of railroad employees.'

"This bill provides that it shall be unlawful for any railroad company in the State of New York 'that runs more than four freight trains in twenty-four hours' to run over any part of its road outside of yard limits any freight train composed of more than twenty cars with less than a full crew of six persons, to-wit: one engineer, one fireman, one conductor, and three brakemen; or a light engine without cars, without a crew composed of one engineer, one fireman, one conductor or flagman, when running a distance of ten miles or more from starting point.

"According to present practice, freight trains are very generally operated with a crew of five persons, and the object of this bill is to compel the employment of an additional brakeman. The necessity for this is said to lie in the fact that without three brakemen the freight trains are insufficiently manned, and that firemen are compelled to leave their places in all kinds of weather to throw switches when the two brakemen are required respectively to go ahead of and behind the train.

"This bill, however, upon the facts developed before me upon the hearing and undisputed, is clearly unconstitutional. Such a measure should define the service required, with suitable refer-

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ence to circumstances and conditions, so that the law would apply in proper cases and not otherwise. The bill takes no account of the difference between the different roads and parts of roads, in trackage and switching facilities, and of the fact that what may be necessary in the case of some railroads may be wholly unnecessary in others. In the case of the New York Central Railroad it was shown that the trackage and switching facilities on its main line were of such a character as to make unnecessary the employment of a third brakeman in accordance with the provisions of the bill. This was frankly conceded by supporters of the bill.

"To require the expenditure of a very large amount of money (estimated at several hundred thousand dollars annually) without necessity for the outlay is simply arbitrary exaction and a taking of property without due process of law. The bill does not refer its requirements to any proper standard of necessity or provide any criterion by which its proper application, under varying conditions, is to be determined. It contains an absolute requirement which, upon the facts conceded before me, cannot be justified."

Governor Dix's Veto Message—1911.

"This bill is objectionable for the reason that it takes away from the Public Service Commission a right which it now has for the proper regulation of railroads."

Governor Foss's Veto Measure—1912.

Governor Foss vetoed a train-crew bill passed by the Massachusetts Legislature in 1912 on the ground that the public interest in such matters of detail in railway operation cannot be well protected by means of special arbitrary legislative enactments, but should be entrusted to an expert regulative commission. He said:

"I cannot pass judgment upon the question as to whether or not all freight trains of thirty cars should carry crews of six men, and all trains of twenty-nine cars five men. These matters can, in my judgment, be determined only by a permanent and powerful commission of experts skilled in railroad operation and regulation."

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BUREAU OF RAILWAY ECONOMICS

Established by Railways of the United States
for the Scientific Study of Transportation Problems

FRANK HAIGH DIXON
CHIEF STATISTICIAN

JULIUS H. PARMELEE
STATISTICIAN

Statistics of Railways 1903-1913 United States

Consecutive No. 75
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BULLETINS OF THE BUREAU OF RAILWAY ECONOMICS

MONTHLY BULLETINS

Consecutive Number.	Monthly Report Series.	Summary of Revenues and Expenses of Steam Roads in the United States for—
1.	1.	July, 1910.
2.	2.	August, 1910.
3.	3.	September, 1910.
5.	4.	November, 1910 (Preliminary Bulletin).
7.	5.	October, 1910.
8.	6.	November, 1910.
9.	7.	December, 1910.
10.	8.	January, 1911.
12.	9.	February, 1911.
13.	10.	March, 1911.
14.	11.	April, 1911.
16.	12.	May, 1911.
19.	13.	June, 1911.
20.	14.	July, 1911.
22.	15.	August, 1911.
25.	16.	September, 1911.
26.	17.	October, 1911.
27.	18.	November, 1911.
29.	19.	December, 1911.
30.	20.	January, 1912.
32.	21.	February, 1912.
33.	22.	March, 1912.
35.	23.	April, 1912.
36.	24.	May, 1912.
37.	25.	June, 1912.
38.	26.	July, 1912.
40.	27.	August, 1912.
41.	28.	September, 1912.
42.	29.	October, 1912.
43.	30.	November, 1912.
44.	31.	December, 1912.
46.	32.	January, 1913.
47.	33.	February, 1913.
48.	34.	March, 1913.
49.	35.	April, 1913.
50.	36.	May, 1913.
51.	37.	June, 1913 (Out of Print).
52.	38.	July, 1913.
54.	39.	August, 1913.
55.	40.	September, 1913.
56.	41.	October, 1913.
57.	42.	November, 1913.
58.	43.	December, 1913.
59.	44.	January, 1914.
60.	45.	February, 1914.
61.	46.	March, 1914.
63.	47.	April, 1914.
64.	48.	May, 1914.
65.	49.	June, 1914.
67.	50.	July, 1914.
68.	51.	August, 1914.
69.	52.	September, 1914.
70.	53.	October, 1914.
71.	54.	November, 1914.
72.	55.	December, 1914.
74.	56.	January, 1915.

(Continued to page 3 of cover.)

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Statistics of Railways

1903-1913

United States

Bureau of Railway Economics
Washington, D. C.
March, 1915

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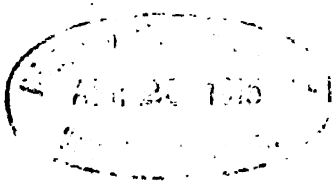

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INTRODUCTORY NOTE.

The purpose of this bulletin is to present for convenient reference aspects of railway operation in the United States as shown by official statistics. The railway tabulations are based upon official data published by the Interstate Commerce Commission for each fiscal year, ended June 30, from 1903 to 1913, the latest year for which such official data is available. Tabulations concerning population and area are based upon the reports of the Census Bureau.

Prior to 1911 the Interstate Commerce Commission presented the statistics of railways by ten territorial groups. Beginning with 1911 it has presented the statistics in three districts representing the three important traffic areas. The map on the following page indicates the ten groups previously used and the three districts that have superseded them.

The statistics given in this bulletin respectively for the three districts for the years prior to 1911 are combinations of the statistics originally published by groups. The boundaries of the present districts coincide exactly with boundaries of the previous groups with one exception, namely: the area between the Illinois-Indiana state line and a line drawn from Chicago through Peoria to St. Louis was formerly included in Group VI, but is now in the Eastern District, which also comprises what were Groups I, II and III. The Western District embraces what were Groups VI, VII, VIII, IX and X, with the exception of that portion of Illinois referred to as now comprised in the Eastern District. Therefore in the tabulations in this bulletin for the years prior to 1911 statistics applying to this portion of Illinois are included in those for the Western District, while in the tabulations for the years 1911 to 1913 statistics for this area are included with those for the Eastern District.

The returns to the Interstate Commerce Commission of small carriers, with annual operating revenues below $100,000, have been so incomplete or so defective in many instances that, beginning with the fiscal year 1913 the Commission has omitted such roads from its statistical summaries. Accordingly, in the present bulletin there are presented the statistics of all roads from 1903 to 1912, while for 1912 and 1913, below the break in each table, are given statistics exclusive of roads with revenues below $100,000. Statistics for 1912 are shown on both bases, inclusive and exclusive of small roads.

During the years covered by the tabulations the Interstate Commerce Commission has prescribed certain changes in the accounting system of the railways and in the methods of making statistical reports. These changes do not seriously impair the comparability of the statistics or disturb their general trend.

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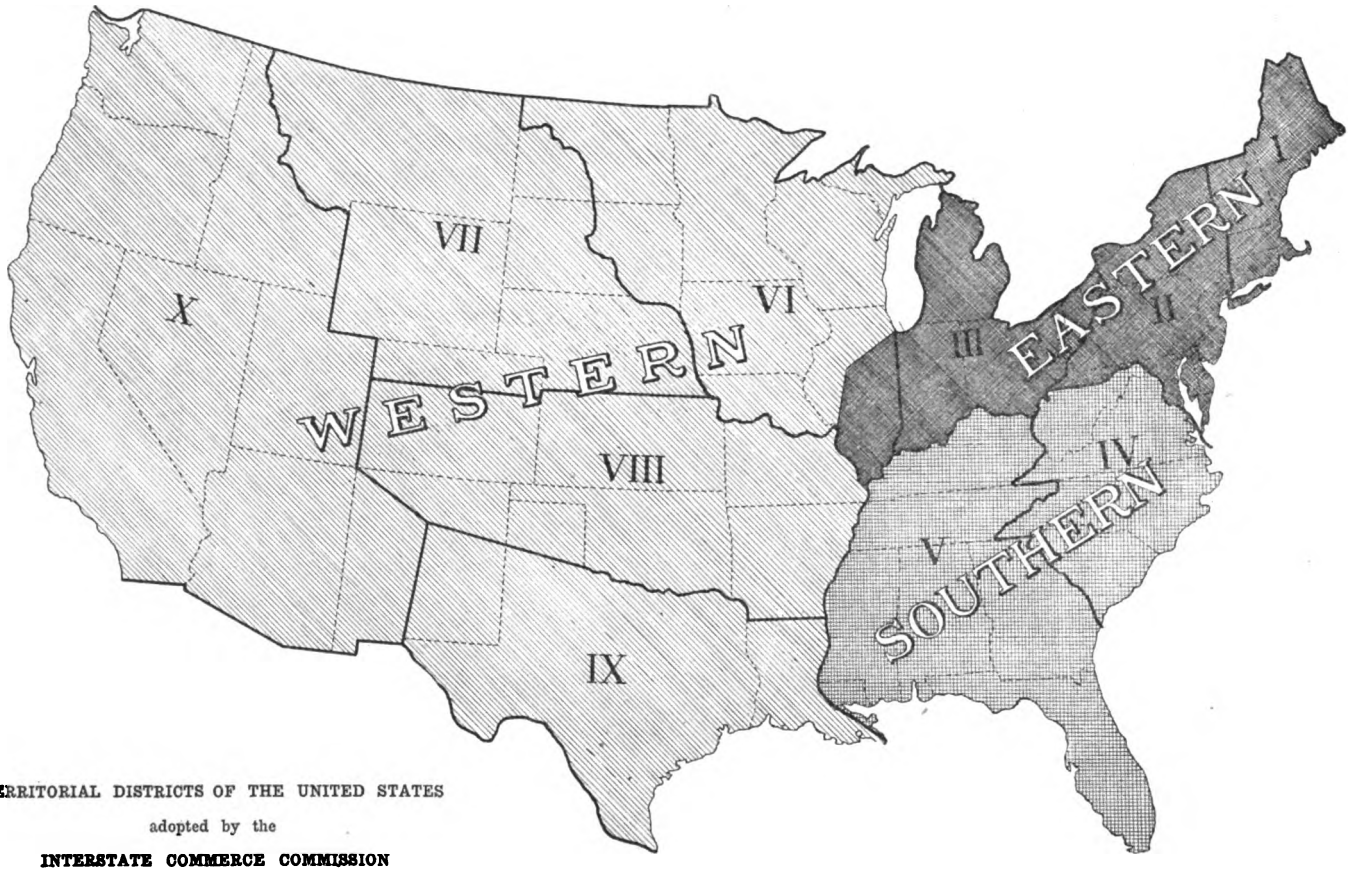

TERRITORIAL DISTRICTS OF THE UNITED STATES

adopted by the

INTERSTATE COMMERCE COMMISSION

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I. POPULATION AND AREA.

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TABLE 1.

POPULATION.

Year.	United States.		Eastern District.		Southern District.		Western District.	
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
1903...	80,787,882	100	33,655,045	41.7	17,282,442	21.4	29,850,395	36.9
1904...	82,385,651	100	34,272,980	41.6	17,528,629	21.3	30,584,042	37.1
1905...	83,983,420	100	34,890,915	41.5	17,774,816	21.2	31,317,689	37.3
1906...	85,581,190	100	35,508,850	41.5	18,021,004	21.1	32,051,336	37.4
1907...	87,178,959	100	36,126,785	41.4	18,267,191	21.0	32,784,983	37.6
1908...	88,776,728	100	36,744,721	41.4	18,513,378	20.8	33,518,629	37.8
1909...	90,374,497	100	37,362,656	41.3	18,759,565	20.8	34,252,276	37.9
1910...	91,972,266	100	37,980,591	41.3	19,005,752	20.7	34,985,923	38.0
1911...	93,927,342	100	41,886,575	44.6	19,306,531	20.6	32,734,236	34.8
1912...	95,545,336	100	42,560,622	44.5	19,555,467	20.5	33,429,247	35.0
1913...	97,163,330	100	43,234,670	44.5	19,804,403	20.4	34,124,257	35.1

TABLE 2.

AREA.

(Square miles.)

Year.	United States.		Eastern District.		Southern District.		Western District.	
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
1903 to 1910.	2,973,890	100	295,085	9.9	439,341	14.8	2,239,464	75.3
1911 to 1913.	2,973,890	100	328,361	11.0	439,341	14.8	2,206,188	74.2

TABLE 3.

DENSITY OF POPULATION.

(Number per square mile.)

Year.	United States.	Eastern District.	Southern District.	Western District.
1903.....	27.2	114.1	39.3	13.3
1904.....	27.7	116.1	39.9	13.7
1905.....	28.2	118.2	40.5	14.0
1906.....	28.8	120.3	41.0	14.3
1907.....	29.3	122.4	41.6	14.6
1908.....	29.9	124.5	42.1	15.0
1909.....	30.4	126.6	42.7	15.3
1910.....	30.9	128.7	43.3	15.6
1911.....	31.6	127.6	43.9	14.8
1912.....	32.1	129.6	44.5	15.2
1913.....	32.7	131.7	45.1	15.5

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TABLE 4.

POPULATION PER MILE OF LINE.*

Year.	United States.	Eastern District.	Southern District.	Western District.
1903	393.5	611.4	490.1	259.6
1904	388.2	611.5	486.4	254.5
1905	387.1	616.6	479.0	254.0
1906	384.9	617.4	471.2	253.2
1907	383.3	622.2	467.6	251.6
1908	385.2	636.2	462.0	252.7
1909	383.9	645.0	454.5	251.5
1910	381.9	653.6	453.1	248.5
1911	381.4	654.1	409.4	242.4
1912	382.4	662.1	406.3	243.2
1912	397.4	683.5	430.7	251.8
1913	397.5	689.8	429.1	251.7

TABLE 5.

POPULATION PER MILE OF MAIN TRACK.*

Year.	United States.	Eastern District.	Southern District.	Western District.
1903	363.5	497.3	482.7	251.3
1904	357.3	493.1	475.9	246.2
1905	354.6	492.3	466.8	244.9
1906	351.7	491.0	458.1	243.4
1907	348.4	489.6	452.2	241.0
1908	349.2	496.1	444.8	242.0
1909	347.6	501.1	436.9	240.4
1910	345.5	505.5	435.0	237.4
1911	343.0	506.8	388.2	231.4
1912	342.2	509.1	383.4	231.2
1912	354.2	521.7	405.1	238.9
1913	353.0	523.5	402.3	237.9

* Figures following the break cover railways with annual operating revenues above $100,000. See page 3.

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TABLE 6.

SQUARE MILES OF AREA PER MILE OF LINE.*

Year.	United States.	Eastern District.	Southern District.	Western District.
1903	14.48	5.36	12.46	19.47
1904	14.01	5.27	12.19	18.64
1905	13.71	5.22	11.84	18.16
1906	13.38	5.13	11.49	17.69
1907	13.07	5.08	11.25	17.18
1908	12.90	5.11	10.96	16.88
1909	12.63	5.09	10.64	16.44
1910	12.35	5.08	10.47	15.91
1911	12.08	5.13	9.32	16.84
1912	11.90	5.11	9.13	16.05
1912	12.37	5.27	9.68	16.62
1913	12.17	5.24	9.52	16.27

TABLE 7.

MILES OF LINE PER 100 SQUARE MILES OF AREA.*

Year.	United States.	Eastern District.	Southern District.	Western District.
1903	6.90	18.65	8.03	5.14
1904	7.14	18.99	8.20	5.37
1905	7.30	19.18	8.45	5.51
1906	7.48	19.49	8.70	5.65
1907	7.65	19.68	8.89	5.82
1908	7.75	19.57	9.12	5.92
1909	7.92	19.63	9.39	6.08
1910	8.10	19.69	9.55	6.29
1911	8.28	19.50	10.73	6.12
1912	8.40	19.58	10.96	6.23
1912	8.08	18.96	10.33	6.02
1913	8.22	19.09	10.51	6.15

* Figures following the break cover railways with annual operating revenues above $100,000. See page 3.

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II. RAILWAY MILEAGE.

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TABLE 8.

MILES OF LINE OPERATED—SINGLE TRACK.*

Year.	United States.		Eastern District.		Southern District.		Western District.	
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
1903...	205,314	100	55,042	26.8	35,266	17.2	115,006	56.0
1904...	212,243	100	56,043	26.4	36,039	17.0	120,161	56.6
1905...	216,974	100	56,583	26.1	37,105	17.1	123,286	56.8
1906...	222,340	100	57,518	25.9	38,241	17.2	126,581	56.9
1907...	227,455	100	58,062	25.5	39,068	17.2	130,325	57.3
1908...	230,494	100	57,754	25.1	40,072	17.4	132,668	57.5
1909...	235,402	100	57,923	24.6	41,273	17.5	136,206	57.9
1910...	240,831	100	58,108	24.1	41,942	17.4	140,781	58.5
1911...	246,238	100	64,038	26.0	47,153	19.2	135,047	54.8
1912...	249,852	100	64,284	25.7	48,133	19.3	137,435	55.0
1912...	240,406	100	62,268	25.9	45,401	18.9	132,737	55.2
1913...	244,419	100	62,674	25.6	46,158	18.9	135,587	55.5

TABLE 9.

MILES OF TRACK OPERATED—MAIN TRACK.*

Year.	United States.		Eastern District.		Southern District.		Western District.	
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
1903...	222,261	100	67,676	30.5	35,806	16.1	118,779	53.4
1904...	230,581	100	69,499	30.1	36,835	16.0	124,247	53.9
1905...	236,855	100	70,880	29.9	38,080	16.1	127,895	54.0
1906...	243,322	100	72,315	29.7	39,337	16.2	131,670	54.1
1907...	250,226	100	73,783	29.5	40,395	16.1	136,048	54.4
1908...	254,193	100	74,065	29.1	41,621	16.4	138,507	54.5
1909...	259,975	100	74,564	28.7	42,935	16.5	142,476	54.8
1910...	266,185	100	75,129	28.2	43,694	16.4	147,362	55.4
1911...	273,851	100	82,655	30.2	49,733	18.2	141,463	51.6
1912...	279,219	100	83,593	29.9	51,008	18.3	144,618	51.8
1912...	269,771	100	81,575	30.2	48,276	17.9	139,920	51.9
1913...	275,242	100	82,580	30.0	49,234	17.9	143,428	52.1

* Includes a small amount of mileage in Canada. Figures following the break cover railways with annual operating revenues above $100,000. See page 3.

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TABLE 10.

MILES OF TRACK OPERATED—YARD TRACK AND SIDINGS.*

Year.	United States.		Eastern District.		Southern District.		Western District.	
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
1903...	61,560	100	26,447	43.0	7,524	12.2	27,589	44.8
1904...	66,492	100	28,045	42.2	8,133	12.2	30,314	45.6
1905...	69,942	100	29,439	42.1	8,797	12.6	31,706	45.3
1906...	73,761	100	31,019	42.1	9,293	12.6	33,449	45.3
1907...	77,749	100	32,241	41.5	10,137	13.0	35,371	45.5
1908...	79,453	100	32,619	41.0	10,856	13.7	35,978	45.3
1909...	82,377	100	33,209	40.3	11,247	13.7	37,921	46.0
1910...	85,582	100	34,009	39.7	11,731	13.7	39,842	46.6
1911...	88,974	100	36,894	41.5	13,925	15.6	38,155	42.9
1912...	92,019	100	37,870	41.2	14,585	15.8	39,564	43.0
1912...	91,180	100	37,607	41.3	14,421	15.8	39,152	42.9
1913...	94,338	100	38,605	40.9	15,046	16.0	40,687	43.1

TABLE 11.

MILES OF TRACK OPERATED—ALL TRACKS.*

Year.	United States.		Eastern District.		Southern District.		Western District.	
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
1903...	283,821	100	94,123	33.1	43,330	15.3	146,368	51.6
1904...	297,073	100	97,544	32.8	44,968	15.2	154,561	52.0
1905...	306,797	100	100,319	32.7	46,877	15.3	159,601	52.0
1906...	317,083	100	103,334	32.6	48,630	15.3	165,119	52.1
1907...	327,975	100	106,024	32.3	50,532	15.4	171,419	52.3
1908...	333,646	100	106,684	32.0	52,477	15.7	174,485	52.3
1909...	342,352	100	107,773	31.5	54,182	15.8	180,397	52.7
1910...	351,767	100	109,138	31.0	55,425	15.8	187,204	53.2
1911...	362,825	100	119,549	33.0	63,658	17.5	179,618	49.5
1912...	371,238	100	121,463	32.7	65,593	17.7	184,182	49.6
1912...	360,951	100	119,182	33.0	62,697	17.4	179,072	49.6
1913...	369,580	100	121,185	32.8	64,280	17.4	184,115	49.8

* Includes a small amount of mileage in Canada. Figures following the break cover railways with annual operating revenues above $100,000. See page 3.

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III. CAPITAL SECURITIES AND DIVIDENDS.

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TABLE 12.

TOTAL CAPITAL SECURITIES.*

Year.	United States.	Eastern District.	Southern District.	Western District.
1903	$12,599,990,258	$4,816,629,573	$1,548,100,706	$6,235,259,979
1904	13,213,124,679	5,096,428,336	1,618,884,950	6,497,811,393
1905	13,805,258,121	5,356,972,099	1,677,073,671	6,771,212,351
1906	14,570,421,478	5,765,714,732	1,782,643,689	7,022,063,057
1907	16,082,146,683	6,347,229,509	1,995,166,177	7,739,750,997
1908	16,767,544,827	6,442,119,486	2,223,539,298	8,101,886,043
1909	17,487,868,935	6,501,431,103	2,265,101,150	8,721,336,682
1910	18,417,132,238	6,757,051,293	2,307,096,516	9,352,984,429
1911	19,208,935,081	7,261,154,383	2,780,400,185	9,167,380,513
1912	19,752,536,264	7,402,003,816	2,841,606,369	9,508,926,079
1912	19,547,639,509	.....	.....	.....
1913	19,796,125,712	7,420,518,948	2,959,205,219	9,416,401,545

TABLE 13.

CAPITAL STOCK.*

Year.	United States.	Eastern District.	Southern District.	Western District.
1903	$6,155,559,032	$2,428,832,520	$659,360,609	$3,067,365,903
1904	6,339,899,329	2,539,298,624	667,215,909	3,133,384,796
1905	6,554,557,051	2,595,937,043	679,760,740	3,278,859,268
1906	6,803,760,093	2,694,844,538	696,487,184	3,412,428,371
1907	7,356,861,691	2,870,527,181	769,294,124	3,717,040,386
1908	7,373,212,323	2,828,679,857	819,117,465	3,725,415,001
1909	7,686,278,545	2,843,385,441	836,104,769	4,006,788,335
1910	8,113,657,380	3,041,886,610	839,877,561	4,231,893,209
1911	8,470,717,611	3,352,507,532	1,049,587,743	4,068,622,336
1912	8,622,400,821	3,404,957,289	1,095,941,097	4,121,502,435
1912	8,493,848,292	.....	.....	.....
1913	8,610,611,327	3,427,713,982	1,165,447,716	4,017,449,629

* Figures following the break cover railways with annual operating revenues above $100,000. See page 3.

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TABLE 14.

FUNDED DEBT.*

Year.	United States.	Eastern District.	Southern District.	Western District.
1903	$6,444,431,226	$2,387,797,053	$888,740,097	$3,167,894,076
1904	6,873,225,350	2,557,129,712	951,669,041	3,364,426,597
1905	7,250,701,070	2,761,035,056	997,312,931	3,492,353,083
1906	7,766,661,385	3,070,870,194	1,086,156,505	3,609,634,686
1907	8,725,284,992	3,476,702,328	1,225,872,053	4,022,710,611
1908	9,394,332,504	3,613,439,629	1,404,421,833	4,376,471,042
1909	9,801,590,390	3,658,045,662	1,428,996,381	4,714,548,347
1910	10,303,474,858	3,715,164,683	1,467,218,955	5,121,091,220
1911	10,738,217,470	3,908,646,851	1,730,812,442	5,098,758,177
1912	11,130,135,443	3,997,046,527	1,745,665,272	5,387,423,644
1912	11,053,791,217	.....	.....	.....
1913	11,185,514,385	3,992,804,966	1,793,757,503	5,398,951,916

TABLE 15.

CAPITAL SECURITIES OUTSTANDING IN THE HANDS OF THE PUBLIC—UNITED STATES.*

Year.	Amount.	Per mile of line.
1908	$12,833,591,510	$57,201
1909	13,711,867,733	59,259
1910	14,338,575,940	62,657
1911	15,008,707,570	63,944
1912	15,087,600,650	63,535
1912	.....	.....
1913	15,330,131,446	65,861

* Figures following the break cover railways with annual operating revenues above $100,000. See page 8.

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TABLE 16.

DIVIDENDS ON STOCK—UNITED STATES.

Year.	Amount of stock paying dividends.	Per cent of stock paying dividends.	Average rate on dividend-paying stock. (Per cent.)	Average rate on all stock. (Per cent.)
1903	$3,450,737,869	56.06	5.70	3.20
1904	3,643,427,319	57.47	6.09	3.50
1905	4,119,086,714	62.84	5.78	3.63
1906	4,526,958,760	66.54	6.03	4.01
1907	4,948,756,203	67.27	6.23	4.19
1908	4,843,370,740	65.69	8.07	5.30
1909	4,920,174,118	64.01	6.53	4.18
1910	5,412,578,457	66.71	7.50	5.00
1911	5,730,250,326	67.65	8.03	5.43
1912	5,581,289,249	64.73	7.17	4.64
1913[a]	5,780,982,416	66.14	6.37	4.22
1913[b]	5,774,587,583	67.06	6.38	4.28

[a] Covers all railways. [b] Covers railways with annual operating revenues above $100,000. See page 8.

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IV. REVENUES, EXPENSES AND TAXES.

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TABLE 17. **TOTAL OPERATING REVENUES.***

Year.	United States.		Eastern District.		Southern District.		Western District.	
	Amount.	Per cent.	Amount.	Per cent.	Amount.	Per cent.	Amount.	Per cent.
1903	$1,900,846,907	100	$847,313,435	44.6	$230,788,942	12.1	$822,744,530	43.3
1904	1,975,174,091	100	873,678,276	44.2	244,527,877	12.4	856,967,938	43.4
1905	2,082,482,406	100	915,240,636	44.0	260,964,909	12.5	906,276,861	43.5
1906	2,325,765,167	100	1,013,949,012	43.6	292,146,076	12.6	1,019,670,079	43.8
1907	2,589,105,578	100	1,107,437,169	42.8	319,545,986	12.3	1,162,122,423	44.9
1908	2,394,780,410	100	1,015,910,479	42.4	299,365,914	12.5	1,079,504,017	45.1
1909	2,419,299,638	100	998,652,453	41.3	306,404,782	12.7	1,114,242,403	46.0
1910	2,752,634,153	100	1,140,618,432	41.4	348,483,869	12.7	1,263,531,852	45.9
1911	2,789,761,669	100	1,212,471,633	43.5	421,305,872	15.1	1,155,984,164	41.4
1912	2,842,695,382	100	1,248,099,590	43.9	439,059,786	15.4	1,155,536,006	40.7
1912	2,826,958,366	100	1,243,937,196	44.0	434,587,888	15.4	1,148,433,282	40.6
1913	3,125,135,798	100	1,374,687,703	44.0	468,058,302	15.0	1,282,389,793	41.0

TABLE 18. **TOTAL OPERATING REVENUES PER MILE OF LINE.***

Year.	United States.	Eastern District.	Southern District.	Western District.
1903	$9,376	$15,507	$6,607	$7,270
1904	9,461	15,730	6,859	7,288
1905	9,704	16,253	7,136	7,445
1906	10,588	17,773	7,755	8,162
1907	11,512	19,163	8,267	9,047
1908	10,459	17,544	7,565	8,209
1909	10,386	17,266	7,533	8,288
1910	11,560	19,660	8,376	9,123
1911	11,457	19,853	9,457	8,382
1912	11,460	19,453	9,216	8,482
1912	11,865	20,016	9,656	8,760
1913	12,892	22,005	10,224	9,559

* Figures following the break cover railways with annual operating revenues above $100,000. See page 3.

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TABLE 19. **TOTAL OPERATING EXPENSES.***

Year.	United States.		Eastern District.		Southern District.		Western District.	
	Amount.	Per cent.	Amount.	Per cent.	Amount.	Per cent.	Amount.	Per cent.
1903	$1,257,538,852	100	$583,653,693	46.4	$156,044,625	12.4	$517,840,534	41.2
1904	1,338,896,253	100	615,980,209	46.0	167,112,419	12.5	555,803,625	41.5
1905	1,390,602,152	100	635,054,801	45.7	177,907,098	12.8	577,640,253	41.5
1906	1,536,877,271	100	691,445,885	45.0	203,349,785	13.2	642,081,601	41.8
1907	1,748,515,814	100	769,661,507	44.0	237,065,888	13.6	741,788,419	42.4
1908	1,670,396,803	100	720,605,479	43.1	221,552,450	13.3	728,238,874	43.6
1909	1,599,903,524	100	675,383,097	42.2	207,714,327	13.0	716,806,100	44.8
1910	1,824,201,156	100	761,423,244	41.7	231,222,204	12.7	831,555,708	45.6
1911	1,915,054,005	100	854,017,274	44.6	288,575,801	15.1	772,460,930	40.3
1912	1,972,415,776	100	878,808,260	44.6	312,212,958	15.8	781,399,558	39.6
1912	1,959,094,658	100	875,139,307	44.7	308,744,096	15.7	775,211,255	39.6
1913	2,169,968,924	100	981,564,859	45.2	336,371,392	15.5	852,032,673	39.3

TABLE 20. **TOTAL OPERATING EXPENSES PER MILE OF LINE.***

Year.	United States.	Eastern District.	Southern District.	Western District.
1903	$6,203	$10,682	$4,467	$4,576
1904	6,413	11,090	4,687	4,727
1905	6,480	11,277	4,865	4,745
1906	6,997	12,120	5,398	5,139
1907	7,775	13,318	6,133	5,775
1908	7,295	12,444	5,599	5,538
1909	6,868	11,677	5,107	5,332
1910	7,661	13,124	5,558	6,004
1911	7,865	13,984	6,478	5,601
1912	7,952	13,697	6,553	5,736
1912	8,223	14,082	6,860	5,913
1913	8,952	15,712	7,348	6,351

* Figures following the break cover railways with annual operating revenues above $100,000. See page 3.

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TABLE 21.

NET OPERATING REVENUE.*

Year.	United States.		Eastern District.		Southern District.		Western District.	
	Amount.	Per cent.	Amount.	Per cent.	Amount.	Per cent.	Amount.	Per cent.
1903.	$643,308,055	100	$263,659,742	41.0	$74,744,317	11.6	$304,903,996	47.4
1904.	636,277,838	100	257,698,067	40.5	77,415,458	12.2	301,164,313	47.3
1905.	691,880,254	100	280,185,835	40.5	83,057,811	12.0	328,636,608	47.5
1906.	788,887,896	100	322,503,127	40.9	88,796,291	11.2	377,588,478	47.9
1907.	840,589,764	100	337,775,662	40.2	82,480,098	9.8	420,334,004	50.0
1908.	724,383,607	100	295,305,000	40.8	77,813,464	10.7	351,265,143	48.5
1909.	819,396,114	100	323,269,356	39.5	98,690,455	12.0	397,436,303	48.5
1910.	928,432,997	100	379,195,188	40.9	117,261,665	12.6	431,976,144	46.5
1911.	874,707,664	100	358,454,359	41.0	132,730,071	15.2	383,523,234	43.8
1912.	870,279,606	100	369,296,330	42.4	126,846,828	14.6	374,136,448	43.0
1912.	867,863,708	100	368,797,889	42.5	125,843,792	14.5	373,222,027	43.0
1913.	955,166,874	100	393,122,844	41.2	131,686,910	13.8	430,357,120	45.0

TABLE 22.

NET OPERATING REVENUE PER MILE OF LINE.*

Year.	United States.	Eastern District.	Southern District.	Western District.
1903	$3,173	$4,825	$2,140	$2,694
1904	3,048	4,640	2,172	2,561
1905	3,224	4,976	2,271	2,700
1906	3,591	5,653	2,357	3,023
1907	3,737	5,845	2,134	3,272
1908	3,164	5,100	1,966	2,671
1909	3,518	5,589	2,426	2,956
1910	3,899	6,536	2,818	3,119
1911	3,592	5,869	2,979	2,781
1912	3,508	5,756	2,663	2,746
1912	3,642	5,934	2,796	2,847
1913	3,940	6,293	2,876	3,208

* Figures following the break cover railways with annual operating revenues above $100,000. See page 3.

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TABLE 23.

TAXES.*

Year.	United States.		Eastern District.		Southern District.		Western District.	
	Amount.	Per cent.	Amount.	Per cent.	Amount.	Per cent.	Amount.	Per cent.
1903	$57,849,569	100	$25,841,003	44.7	$6,564,725	11.3	$25,443,841	44.0
1904	61,696,354	100	27,281,261	44.2	7,408,685	12.0	27,006,408	43.8
1905	63,474,679	100	26,822,250	42.2	7,603,059	12.0	29,049,370	45.8
1906	74,785,615	100	33,966,223	45.4	8,134,906	10.9	32,684,486	43.7
1907	80,312,375	100	34,997,708	43.6	9,115,747	11.3	36,198,920	45.1
1908	84,599,992	100	35,075,252	41.5	10,236,454	12.1	39,288,286	46.4
1909	90,558,316	100	38,003,994	42.0	10,673,226	11.8	41,881,096	46.2
1910	103,853,576	100	41,882,451	40.3	11,679,163	11.3	50,291,962	48.4
1911	108,309,512	100	46,350,019	42.8	15,461,908	14.3	46,497,585	42.9
1912	120,091,534	100	51,455,928	42.8	16,190,923	13.5	52,444,683	43.7
1912	.....	...	.....	....	.....	....	.....	....
1913	127,331,960	100	54,171,368	42.5	17,203,278	13.5	55,957,314	44.0

TABLE 24.

TAXES PER MILE OF LINE.*

Year.	United States.	Eastern District.	Southern District.	Western District.
1903	$285	$473	$188	$225
1904	296	491	208	230
1905	296	476	208	239
1906	340	595	216	262
1907	357	606	236	282
1908	369	606	259	299
1909	389	657	262	312
1910	436	722	281	363
1911	445	759	347	337
1912	484	802	340	385
1912	...	...	...	...
1913	503	864	376	379

* Figures following the break cover railways with annual operating revenues above $100,000. See page 8.

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TABLE 25.

OPERATING REVENUES IN DETAIL.

*Freight Revenue.**

Year.	United States.	Eastern District.	Southern District.	Western District.
1903	$1,338,020,026	$590,054,009	$166,698,746	$581,267,271
1904	1,379,002,693	605,269,371	175,638,490	598,094,832
1905	1,450,772,838	638,488,379	185,516,649	626,767,810
1906	1,640,386,655	714,405,951	210,494,544	715,486,160
1907	1,823,651,998	786,454,587	226,908,823	810,288,588
1908	1,656,062,597	704,628,266	210,299,166	741,135,165
1909	1,678,058,645	693,832,426	219,235,117	764,991,102
1910	1,926,940,028	807,378,037	252,352,819	867,209,172
1911	1,925,950,887	846,102,280	298,233,804	781,614,803
1912	1,968,598,630	873,338,982	311,122,036	784,137,612
1912	1,956,942,262	870,561,748	307,637,291	778,743,223
1913	2,198,930,565	977,996,783	333,683,307	887,250,475

*Passenger Revenue.**

1903	$421,704,592	$197,943,820	$47,268,405	$176,492,367
1904	444,326,991	204,348,395	50,636,471	189,342,125
1905	472,694,732	210,219,614	55,996,810	206,478,308
1906	510,032,583	226,471,058	59,601,298	223,960,227
1907	564,606,343	241,020,076	68,343,456	255,242,811
1908	567,071,551	239,019,768	68,466,194	259,585,589
1909	563,746,612	231,691,496	65,491,959	266,563,157
1910	629,452,643	251,888,951	72,459,675	305,104,017
1911	657,638,291	276,892,713	90,820,258	289,925,320
1912	660,373,176	281,602,503	94,660,991	284,109,682
1912	657,362,319	280,584,639	93,887,737	282,889,943
1913	695,987,817	294,695,596	99,034,688	302,257,533

*Mail Revenue.**

1903	$41,709,396	$15,591,998	$5,673,966	$20,443,432
1904	44,499,732	16,894,898	5,670,773	21,934,061
1905	45,426,125	16,938,488	6,233,660	22,253,977
1906	47,371,453	18,579,757	6,394,819	22,396,877
1907	50,378,964	18,543,577	6,254,146	25,581,241
1908	48,537,768	17,496,906	6,024,777	25,016,085
1909	49,391,681	17,539,833	6,152,346	25,699,502
1910	48,946,052	17,041,450	6,143,317	25,761,285
1911	50,702,625	18,403,859	6,985,944	25,312,822
1912	50,935,856	18,442,687	6,940,402	25,552,767
1912	50,675,660	18,380,821	6,865,885	25,428,954
1913	50,789,212	18,201,129	7,265,057	25,323,026

* Figures following the break cover railways with annual operating revenues above $100,000. See page 8.

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TABLE 25—Continued.

*Express Revenue.**

Year.	United States.	Eastern District.	Southern District.	Western District.
1903	$38,331,964	$18,885,169	$4,610,614	$14,836,181
1904	41,875,636	20,050,421	5,457,546	16,367,669
1905	45,149,155	21,829,801	5,717,101	17,602,253
1906	51,010,930	24,439,278	6,607,694	19,963,958
1907	57,332,931	26,418,747	7,286,018	23,628,166
1908	58,714,502	27,412,120	7,388,966	23,913,416
1909	59,663,774	26,550,848	7,748,113	25,364,813
1910	67,213,583	29,869,378	8,488,213	28,855,992
1911	70,725,137	32,154,998	10,565,819	28,004,320
1912	73,203,730	32,905,994	11,565,112	28,732,624
1912	72,983,618	32,816,700	11,522,925	28,643,993
1913	79,717,266	36,133,752	11,827,666	31,755,848

*Passenger Service Train-Revenue.**

(Passenger, excess baggage, parlor and chair car, mail, express, milk and other passenger train-revenue.)

1903	$511,567,229	$236,668,452	$58,388,947	$216,509,830
1904	541,617,105	246,407,833	62,581,282	232,627,990
1905	574,310,154	253,689,270	68,850,861	251,770,023
1906	619,729,203	274,131,533	73,536,581	272,061,089
1907	684,993,137	291,027,152	82,932,119	311,033,866
1908	690,666,227	292,398,155	83,108,013	315,160,059
1909	690,493,165	285,019,287	80,705,983	324,767,895
1910	764,773,354	308,913,379	88,461,397	367,398,578
1911	799,771,186	338,882,833	110,215,315	350,673,038
1912	806,238,267	345,172,512	115,147,163	345,918,592
1912	802,651,216	343,929,617	114,250,628	344,470,971
1913	849,985,506	361,911,685	120,220,646	367,853,175

* Figures following the break cover railways with annual operating revenues above $100,000. See page 3.

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TABLE 26.

OPERATING EXPENSES IN DETAIL.

*Maintenance of Way and Structures.**

Year.	United States.	Eastern District.	Southern District.	Western District.
1903	$266,421,774	$112,721,464	$34,273,554	$119,426,756
1904	261,280,454	110,068,086	35,133,095	116,079,273
1905	275,046,036	114,633,121	37,972,711	122,440,204
1906	311,720,820	126,778,495	43,574,284	141,368,041
1907	343,544,907	137,967,918	48,586,723	156,990,266
1908	329,578,071	128,779,292	42,902,528	157,896,251
1909	308,570,767	116,871,021	40,367,112	151,332,634
1910	368,944,774	139,013,044	47,021,069	182,910,661
1911	366,025,262	150,749,921	57,067,778	158,207,563
1912	367,448,229	150,838,598	59,450,331	157,159,300
1912	363,519,782	149,738,693	58,450,251	155,330,838
1913	421,232,395	179,853,493	66,307,588	175,071,314

*Maintenance of Equipment.**

1903	$240,429,742	$115,335,635	$33,230,324	$91,863,783
1904	267,184,739	128,636,799	36,016,086	102,531,854
1905	288,441,273	137,492,560	39,060,800	111,887,913
1906	328,554,658	155,025,490	45,166,675	128,362,493
1907	368,061,728	170,222,639	52,853,847	144,985,242
1908	368,448,241	165,894,126	53,488,732	149,065,383
1909	363,972,764	161,806,588	50,797,326	151,368,850
1910	413,346,364	183,616,460	58,426,484	171,303,420
1911	428,367,306	198,297,688	71,365,189	158,704,429
1912	450,372,546	211,360,009	78,293,968	160,718,569
1912	448,345,261	210,827,637	77,753,060	159,764,564
1913	511,561,363	242,678,866	84,265,002	184,617,495

*Traffic and Transportation.**

1903	$702,509,818	$336,481,520	$81,225,883	$284,802,415
1904	758,238,681	356,361,090	88,438,306	313,439,285
1905	771,228,666	360,927,118	92,631,806	317,669,742
1906	836,202,707	386,009,514	105,669,134	344,524,059
1907	970,952,924	436,094,876	125,928,571	408,929,477
1908	916,900,138	404,722,835	116,730,750	395,446,553
1909	863,588,165	372,292,586	107,036,813	384,258,766
1910	973,186,887	412,380,307	115,487,117	445,319,463
1911	1,046,548,472	474,588,362	148,057,209	423,902,901
1912	1,079,837,688	486,032,149	161,784,283	432,021,256
1912	1,073,984,677	484,353,153	160,372,953	429,258,571
1913	1,159,102,858	526,694,820	172,877,195	459,530,843

* Figures following the break cover railways with annual operating revenues above $100,000. See page 8.

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TABLE 26—Continued.

*General.**

Year.	United States.	Eastern District.	Southern District.	Western District.
1903	$47,767,947	$19,071,833	$7,056,958	$21,639,156
1904	51,579,196	20,876,096	7,237,944	23,465,156
1905	55,319,805	21,957,055	7,862,270	25.500,480
1906	59,752,230	23,506,148	8,665,342	27.580.740
1907	65,404,655	25,159,180	9,568,613	30,676,862
1908	55,287,963	21,158,791	8,407,844	25,721,328
1909	63,729,941	24,395,790	9,513,076	29,821,075
1910	68,694,684	26,413,433	10.287,534	31,993.717
1911	73,689,373	30,357,531	11,875,776	31,456,066
1912	74,517,548	30,497,637	12.549,051	31,470,860
1912	73,244,938	30,219,824	12,167,832	30,857,282
1913	78,072,308	32,337,680	12,921,607	32,813,021

TABLE 27.

OPERATING RATIO.*

(Ratio of operating expenses to operating revenues.)

Year.	United States.	Eastern District.	Southern District.	Western District.
	(per cent.)	(per cent.)	(per cent.)	(per cent.)
1903	66.1	68.8	67.6	62.9
1904	67.7	70.5	68.3	64.8
1905	66.7	69.3	68.1	63.7
1906	66.0	68.1	69.6	62.9
1907	67.5	69.4	74.1	63.8
1908	69.7	70.9	74.0	67.4
1909	66.1	67.6	67.7	64.3
1910	66.2	66.7	66.3	65.8
1911	68.6	70.4	68.5	66.8
1912	69.3	70.4	71.1	67.6
1912	69.3	70.4	71.0	67.5
1913	69.4	71.4	71.9	66.4

* Figures following the break cover railways with annual operating revenues above $100.000.
See page 3.

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V. EMPLOYEES AND COMPENSATION.

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TABLE 28.

NUMBER OF EMPLOYEES.

*Number of All Employees.**

Year.	United States.		Eastern District.		Southern District.		Western District.	
	Number.	Per 100 miles of line.	Number.	Per 100 miles of line.	Number.	Per 100 miles of line.	Number.	Per 100 miles of line.
1903.....	1,312,537	639	594,573	1080	179,563	509	538,401	468
1904.....	1,296,121	611	586,674	1047	175,153	486	534,294	445
1905.....	1,382,196	637	620,825	1097	186,983	504	574,388	466
1906.....	1,521,355	684	674,726	1173	210,834	551	635,795	502
1907.....	1,672,074	735	731,453	1260	232,513	595	708,108	544
1908.....	1,436,275	623	635,695	1101	206,149	514	594,431	448
1909.....	1,502,823	638	648,391	1119	197,647	479	656,785	482
1910.....	1,699,420	706	726,431	1250	223,257	532	749,732	533
1911.....	1,669,809	678	729,636	1141	276,495	586	663,678	491
1912.....	1,716,380	687	759,638	1182	296,211	615	660,531	481
1912.....	1,699,941	707	755,183	1213	291,257	641	653,501	492
1913.....	1,815,239	743	823,556	1314	299,068	648	692,615	511

*Number of General and Other Officers.**

1903.....	10,043	5	3,891	7	2,351	7	3,801	3
1904.....	10,540	5	4,392	8	2,108	6	4,040	3
1905.....	11,242	5	4,650	8	2,196	6	4,396	4
1906.....	12,795	6	5,430	9	2,433	6	4,932	4
1907.....	13,956	6	5,929	10	2,772	7	5,255	4
1908.....	12,827	5	4,846	8	2,790	7	5,191	4
1909.....	13,514	5	4,912	8	2,762	7	5,840	4
1910.....	14,868	6	5,229	9	2,813	7	6,826	5
1911.....	15,824	6	5,896	9	3,347	7	6,581	5
1912.....	16,204	6	5,938	9	3,756	7	6,510	5
1912.....	14,372	6	5,426	9	3,233	7	5,713	4
1913.....	15,104	6	5,733	9	3,448	8	5,923	5

*Number of General Office Clerks.**

1903.....	42,218	21	17,543	32	6,696	19	17,979	16
1904.....	46,037	22	19,803	35	7,115	20	19,119	16
1905.....	51,284	24	23,106	41	7,308	20	20,870	17
1906.....	57,210	26	26,025	45	8,053	21	23,132	18
1907.....	65,700	29	29,308	50	9,099	23	27,293	21
1908.....	63,973	28	28,441	49	9,476	24	26,056	20
1909.....	69,959	30	29,543	51	9,320	23	31,096	23
1910.....	76,329	32	32,141	55	10,638	25	33,550	24
1911.....	76,513	31	35,259	55	10,641	23	30,613	23
1912.....	78,818	32	36,305	56	11,647	24	30,866	22
1912.....	78,306	33	36,175	58	11,517	25	30,614	23
1913.....	84,267	34	39,739	63	11,707	25	32,821	24

* Figures following the break cover railways with annual operating revenues above $100,000. See page 3.

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TABLE 28—Continued.

*Number of Station Agents.**

Year.	United States.		Eastern District.		Southern District.		Western District.	
	Number.	Per 100 miles of line.	Number.	Per 100 miles of line.	Number.	Per 100 miles of line.	Number.	Per 100 miles of line.
1903.....	34,892	17	14,531	26	6,327	18	14,034	12
1904.....	34,918	16	14,507	26	5,816	16	14,595	12
1905.....	35,245	16	14,631	26	5,906	16	14,708	12
1906.....	34,940	16	14,009	24	6,379	17	14,552	11
1907.....	35,649	16	14,353	25	6,341	16	14,955	11
1908.....	35,740	16	14,202	25	6,385	16	15,153	11
1909.....	36,519	15	14,161	25	6,511	16	15,847	12
1910.....	37,379	16	14,261	25	6,758	16	16,360	12
1911.....	38,277	16	15,133	24	7,835	17	15,309	11
1912.....	38,428	15	15,274	24	7,949	17	15,205	11
1912.....	37,395	16	14,927	24	7,598	17	14,870	11
1913.....	37,721	16	14,474	23	7,934	17	15,313	11

*Number of Other Station Men.**

1903.....	120,724	59	63,737	116	16,471	47	40,516	35
1904.....	120,002	57	63,712	114	16,871	47	39,419	33
1905.....	125,180	58	64,630	114	18,234	49	42,316	34
1906.....	138,778	62	70,885	123	19,932	52	47,961	38
1907.....	152,929	67	78,963	136	21,686	56	52,280	40
1908.....	132,013	57	68,481	119	18,794	47	44,738	34
1909.....	136,733	58	71,738	124	18,316	44	46,679	34
1910.....	153,104	64	78,944	136	20,396	49	53,764	38
1911.....	153,117	62	79,960	125	26,223	55	46,934	35
1912.....	161,730	65	83,576	130	28,130	59	50,024	36
1912.....	161,206	67	83,393	134	27,979	62	49,834	38
1913.....	167,450	69	88,085	141	27,614	60	51,751	38

*Number of Enginemen.**

1903.....	52,993	26	25,274	46	6,928	20	20,791	18
1904.....	52,451	25	25,607	46	6,776	19	20,068	17
1905.....	54,817	25	26,362	47	7,160	19	21,295	17
1906.....	59,855	27	28,435	49	7,812	20	23,608	19
1907.....	65,298	29	30,511	53	8,528	22	26,259	20
1908.....	57,668	25	26,754	46	7,878	20	23,036	17
1909.....	57,077	24	26,013	45	7,596	18	23,468	17
1910.....	64,691	27	29,084	50	8,145	19	27,462	20
1911.....	63,390	26	29,857	47	9,901	21	23,632	18
1912.....	64,382	26	30,760	48	10,806	22	22,816	17
1912.....	63,672	26	30,558	49	10,589	23	22,525	17
1913.....	67,026	27	32,828	52	10,445	23	23,753	18

* Figures following the break cover railways with annual operating revenues above $100,000. See page 3.

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TABLE 28—Continued.

*Number of Firemen.**

Year.	United States.		Eastern District.		Southern District.		Western District.	
	Number.	Per 100 miles of line.	Number.	Per 100 miles of line.	Number.	Per 100 miles of line.	Number.	Per 100 miles of line.
1903.....	56,041	27	26,561	48	7,612	22	21,868	19
1904.....	55,004	26	26,773	48	7,404	21	20,827	17
1905.....	57,892	27	27,430	48	8,038	22	22,424	18
1906.....	62,678	28	29,061	51	8,625	23	24,992	20
1907.....	69,384	31	32,013	55	9,395	24	27,976	21
1908.....	61,215	27	28,247	49	8,258	21	24,710	19
1909.....	60,349	26	28,145	49	7,893	19	24,311	18
1910.....	68,321	28	30,314	52	8,582	20	29,425	21
1911.....	66,376	27	30,994	49	10,731	23	24,651	18
1912.....	67,195	27	31,892	50	11,793	25	23,510	17
1912.....	66,487	28	31,690	51	11,575	25	23,222	17
1913.....	70,477	29	34,317	55	11,739	25	24,421	18

*Number of Conductors.**

1903.....	39,741	19	19,783	36	4,733	13	15,225	13
1904.....	39,645	19	19,860	35	4,799	13	14,986	12
1905.....	41,061	19	20,311	36	5,164	14	15,586	13
1906.....	43,936	20	21,587	38	5,855	15	16,494	13
1907.....	48,869	22	23,440	40	6,752	17	18,677	14
1908.....	43,322	19	20,883	36	5,813	15	16,626	13
1909.....	43,608	18	20,920	36	5,979	14	16,709	12
1910.....	48,682	20	23,059	40	6,397	15	19,226	14
1911.....	48,200	20	23,309	36	8,079	17	16,812	12
1912.....	49,685	20	24,142	38	8,637	18	16,906	12
1912.....	49,062	20	23,938	38	8,466	19	16,658	13
1913.....	52,086	21	25,690	41	8,766	19	17,630	13

*Number of Other Trainmen.**

1903.....	104,885	51	56,113	102	12,327	35	36,445	32
1904.....	106,734	50	55,636	99	13,136	36	37,962	32
1905.....	111,405	51	56,960	101	14,145	38	40,300	33
1906.....	119,087	53	60,301	105	16,185	42	42,601	34
1907.....	134,257	59	65,667	113	18,630	48	49,960	38
1908.....	114,580	50	56,499	98	15,721	39	42,360	32
1909.....	114,760	49	55,254	95	14,757	36	44,749	33
1910.....	136,938	57	62,398	107	16,642	40	57,898	41
1911.....	133,221	54	62,857	98	19,964	42	50,400	37
1912.....	137,067	55	66,346	103	21,766	45	48,955	36
1912.....	136,008	57	65,999	106	21,432	47	48,577	37
1913.....	146,855	60	72,743	116	23,067	50	51,045	38

* Figures following the break cover railways with annual operating revenues above $100,000. See page 3.

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TABLE 28—Continued.

*Number of Machinists.**

Year.	United States.		Eastern District.		Southern District.		Western District.	
	Number.	Per 100 miles of line.	Number.	Per 100 miles of line.	Number.	Per 100 miles of line.	Number.	Per 100 miles of line.
1903.....	44,819	22	23,937	43	4,688	13	16,194	14
1904.....	46,272	22	24,088	43	5,064	14	17,120	14
1905.....	47,018	22	24,422	43	5,232	14	17,364	14
1906.....	51,253	23	27,327	48	5,936	16	17,990	14
1907.....	55,244	24	29,644	51	6,233	16	19,367	15
1908.....	44,941	19	24,749	43	5,298	13	14,894	11
1909.....	48,237	20	25,154	43	5,382	13	17,701	13
1910.....	55,193	23	28,323	49	6,510	16	20,360	14
1911.....	55,207	22	30,701	48	7,788	17	16,718	12
1912.....	57,507	23	32,494	51	8,606	18	16,407	12
1912.....	57,266	24	32,430	52	8,517	19	16,319	12
1913.....	60,726	25	34,758	55	7,600	16	18,368	14

*Number of Carpenters.**

1903.....	56,407	27	25,112	46	9,225	26	22,070	19
1904.....	53,646	25	23,444	42	8,851	25	21,351	18
1905.....	56,089	26	24,595	43	9,614	26	21,880	18
1906.....	63,830	29	28,727	50	10,654	28	24,449	19
1907.....	70,394	31	31,410	54	10,745	28	28,239	22
1908.....	58,946	25	25,153	44	9,929	25	23,864	18
1909.....	60,867	26	26,789	46	9,120	22	24,958	18
1910.....	68,085	28	29,464	51	10,417	25	28,204	20
1911.....	65,989	27	29,537	46	12,800	27	23,652	18
1912.....	70,817	28	31,808	49	14,639	30	24,370	18
1912.....	70,530	29	31,723	51	14,560	32	24,247	18
1913.....	78,654	32	34,471	55	15,700	34	28,483	21

*Number of Other Shopmen.**

1903.....	154,635	75	68,742	125	23,703	67	62,190	54
1904.....	159,472	75	70,852	126	23,362	65	65,258	54
1905.....	176,348	81	74,853	132	27,181	73	74,314	60
1906.....	199,940	90	87,870	153	31,408	82	80,662	64
1907.....	221,656	97	92,242	159	34,779	89	94,635	73
1908.....	176,680	77	79,740	138	24,962	62	71,978	54
1909.....	195,110	83	85,216	147	24,890	60	85,004	62
1910.....	225,196	94	95,058	164	30,716	73	99,422	71
1911.....	226,785	92	93,487	146	45,257	96	88,041	65
1912.....	249,429	100	103,913	162	53,083	110	92,433	67
1912.....	248,802	103	103,712	167	52,942	117	92,148	69
1913.....	271,095	111	115,756	185	54,817	119	100,522	74

* Figures following the break cover railways with annual operating revenues above $100,000.
See page 8.

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TABLE 28—Continued.

*Number of Section Foremen.**

Year.	United States.		Eastern District.		Southern District.		Western District.	
	Number.	Per 100 miles of line.	Number.	Per 100 miles of line.	Number.	Per 100 miles of line.	Number.	Per 100 miles of line.
1903.....	37,101	18	13,138	24	5,324	15	18,639	16
1904.....	37,609	18	12,981	23	5,611	16	19,017	16
1905.....	38,217	18	13,220	23	5,632	15	19,365	16
1906.....	40,463	18	13,873	24	6,023	16	20,567	16
1907.....	41,391	18	14,056	24	6,224	16	21,111	16
1908.....	41,419	18	13,831	24	6,247	16	21,341	16
1909.....	41,859	18	13,945	24	6,293	15	21,621	16
1910.....	44,207	18	14,359	25	6,528	16	23,320	17
1911.....	44,466	18	15,213	24	7,543	16	21,710	16
1912.....	44,277	18	15,257	24	7,751	16	21,269	15
1912.....	43,328	18	14,989	24	7,475	16	20,864	16
1913.....	44,737	18	15,779	25	7,626	17	21,332	16

*Number of Other Trackmen.**

1903.....	300,714	147	111,421	202	43,568	124	145,725	127
1904.....	289,044	136	105,476	188	41,562	115	142,006	118
1905.....	311,185	143	114,344	202	44,562	120	152,279	124
1906.....	343,791	155	123,496	215	48,666	127	171,629	136
1907.....	367,277	162	128,822	222	51,727	132	186,728	143
1908.....	299,448	130	101,612	176	45,776	114	152,060	115
1909.....	320,762	136	110,316	190	43,000	104	167,446	123
1910.....	378,955	157	129,588	223	48,525	116	200,842	143
1911.....	363,028	147	121,272	190	61,473	130	180,283	134
1912.....	357,326	143	127,486	198	62,647	130	167,193	122
1912.....	351,293	146	126,142	203	60,635	134	164,516	124
1913.....	376,871	154	141,781	226	62,218	135	172,872	127

*Number of Switch Tenders, Crossing Tenders, and Watchmen.**

1903.....	49,961	24	26,335	48	6,225	18	17,401	15
1904.....	46,262	22	25,688	46	5,333	15	15,241	13
1905.....	45,532	21	25,798	46	5,093	14	14,641	12
1906.....	49,659	22	25,518	44	5,991	16	18,150	14
1907.....	53,414	23	29,534	51	6,091	16	17,789	14
1908.....	46,221	20	27,211	47	5,273	13	13,737	10
1909.....	44,698	19	26,883	46	4,808	12	13,007	10
1910.....	44,682	19	28,495	49	4,997	12	11,190	8
1911.....	40,005	16	26,922	42	4,685	10	8,398	6
1912.....	38,773	15	25,882	40	5,009	10	7,882	6
1912.....	38,535	16	25,790	41	4,948	11	7,797	6
1913.....	38,253	16	26,022	42	4,308	9	7,923	6

* Figures following the break cover railways with annual operating revenues above $100,000. See page 3.

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TABLE 28—Continued.

*Number of Telegraph Operators and Dispatchers.**

Year.	United States.		Eastern District.		Southern District.		Western District.	
	Number.	Per 100 miles of line.	Number.	Per 100 miles of line.	Number.	Per 100 miles of line.	Number.	Per 100 miles of line.
1903.....	30,984	15	14,722	27	3,997	11	12,265	11
1904.....	30,425	14	14,767	26	4,127	11	11,531	10
1905.....	31,963	15	15,261	27	4,381	12	12,321	10
1906.....	36,090	16	16,797	29	5,243	14	14,050	11
1907.....	39,193	17	17,908	31	5,853	15	15,432	12
1908.....	39,744	17	18,682	32	5,797	14	15,265	12
1909.....	39,115	17	18,823	32	5,380	13	14,912	11
1910.....	42,435	18	19,602	34	5,764	14	17,069	12
1911.....	41,196	17	20,566	32	5,773	12	14,857	11
1912.....	42,548	17	21,248	33	6,578	14	14,722	11
1912.....	42,480	18	21,205	34	6,567	14	14,708	11
1913.....	43,061	18	21,140	34	6,565	14	15,356	11

*Number of All Other Employees and Laborers.**

(Including floating equipment employees.)

1903.....	176,379	86	83,733	152	19,388	55	73,258	64
1904.....	168,060	79	79,088	141	17,218	48	71,754	60
1905.....	187,718	86	90,252	159	17,137	46	80,329	65
1906.....	207,050	93	95,385	166	21,639	57	90,026	71
1907.....	237,463	104	107,653	185	27,658	71	102,152	78
1908.....	207,538	90	96,364	167	27,752	69	83,422	63
1909.....	219,656	94	90,579	156	25,640	62	103,437	76
1910.....	240,355	99	106,112	183	29,429	70	104,814	74
1911.....	238,215	97	108,673	170	34,455	73	95,087	70
1912.....	242,194	97	107,317	167	33,414	70	101,463	74
1912.....	241,199	100	107,086	172	33,224	73	100,889	76
1913.....	260,856	107	120,240	192	35,514	77	105,102	77

* Figures following the break cover railways with annual operating revenues above $100,000. See page 3.

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TABLE 29.

AGGREGATE ANNUAL COMPENSATION OF EMPLOYEES.

*Compensation of All Employees.**

Year.	United States.	Eastern District.	Southern District.	Western District.
1903	$757,321,415	$357,762,999	$89,928,438	$309,629,978
1904	817,598,810	375,756,880	95,218,700	346,623,230
1905	839,944,680	385,864,578	100,141,548	353,938,554
1906	900,801,653	422,743,890	114,262,040	363,795,723
1907	1,072,386,427	478,725,152	134,069,807	459,591,468
1908	1,035,437,528	458,577,320	127,933,543	448,926,665
1909	988,323,694	430,724,008	117,686,782	439,912,904
1910	1,143,725,306	494,562,704	132,954,744	516,207,858
1911	1,208,466,470	558,101,577	172,856,304	477,508,589
1912	1,252,347,697	571,429,031	190,389,878	490,528,788
1912	1,245,034,959	569,415,142	188,410,758	487,209,059
1913	1,373,830,589	632,675,701	204,445,231	536,709,657

*Compensation of General and Other Officers.**

1903	$23,254,220	$9,125,836	$4,162,612	$9,865,772
1904	25,292,006	10,195,990	4,086,354	11,009,662
1905	26,754,447	10,550,326	4,307,971	11,896,150
1906	28,781,572	11,875,326	4,638,553	12,267,693
1907	32,243,832	13,244,874	5,233,263	13,765,695
1908	32,903,307	13,082,224	5,403,085	14,417,998
1909	33,816,386	13,446,439	5,388,781	14,981,166
1910	37,448,770	14,392,147	5,815,830	17,240,793
1911	39,864,265	16,339,178	6,789,041	16,736,046
1912	41,502,574	16,596,951	7,483,801	17,421,822
1912	40,389,483	16,342,559	7,142,832	16,904,092
1913	42,776,142	17,210,392	7,785,154	17,780,596

*Compensation of General Office Clerks.**

1903	$30,486,272	$13,388,416	$4,344,774	$12,753,082
1904	34,735,708	15,406,856	4,942,846	14,386,006
1905	37,445,570	16,946,770	5,133,997	15,364,803
1906	41,227,916	19,612,572	5,698,143	15,917,201
1907	48,340,123	22,086,219	6,559,973	19,693,931
1908	51,867,978	23,228,314	6,955,025	21,684,639
1909	52,516,034	23,759,052	6,877,611	21,879,371
1910	58,176,906	25,891,997	7,748,535	24,536,374
1911	61,971,046	30,038,608	8,347,493	23,584,945
1912	64,739,954	30,890,301	9,151,112	24,698,541
1912	64,507,344	30,826,977	9,089,323	24,591,044
1913	69,443,296	33,764,501	9,459,255	26,219,540

* Figures following the break cover railways with annual operating revenues above $100,000. See page 8.

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TABLE 29—Continued.

*Compensation of Station Agents.**

Year.	United States.	Eastern District.	Southern District.	Western District.
1903	$21,011,724	$9,002,787	$3,229,841	$8,779,096
1904	22,584,269	9,420,432	3,213,848	9,949,989
1905	23,112,137	9,382,329	3,354,044	10,375,764
1906	22,571,595	9,240,392	3,508,395	9,822,808
1907	24,831,066	9,990,444	3,820,655	11,019,967
1908	25,908,206	10,243,958	4,008,452	11,655,796
1909	25,881,387	10,253,907	3,974,198	11,653,282
1910	27,203,943	10,532,819	4,171,259	12,499,865
1911	28,922,662	11,775,573	5,301,162	11,845,927
1912	29,935,642	12,019,702	5,629,638	12,286,302
1912	29,440,268	11,872,752	5,482,376	12,085,140
1913	30,016,048	11,756,252	5,811,590	12,448,206

*Compensation of Other Station Men.**

1903	$60,463,462	$34,531,222	$6,377,802	$19,554,438
1904	66,318,729	36,722,918	7,258,999	22,336,812
1905	67,012,465	36,356,808	7,948,230	22,707,427
1906	70,702,517	38,486,726	8,981,761	23,234,030
1907	84,244,486	43,603,565	10,522,159	30,118,762
1908	81,766,135	42,888,876	9,962,672	28,914,587
1909	79,089,030	41,651,430	9,285,134	28,152,466
1910	88,926,764	46,323,577	10,066,847	32,536,340
1911	95,317,815	51,470,197	13,669,248	30,178,370
1912	97,612,039	51,673,714	14,953,189	30,985,136
1912	97,429,226	51,613,271	14,900,808	30,915,147
1913	106,242,920	56,764,234	16,098,518	33,380,168

*Compensation of Enginemen.**

1903	$64,173,825	$30,326,989	$8,596,371	$25,250,465
1904	68,946,543	31,823,340	8,989,046	28,134,157
1905	70,626,750	32,475,836	9,456,034	28,694,880
1906	74,581,454	34,498,928	10,451,619	29,630,907
1907	87,496,778	38,759,235	12,300,003	36,437,540
1908	84,517,730	37,153,483	11,505,644	35,858,603
1909	78,988,116	33,975,945	10,511,778	34,500,393
1910	91,323,678	39,396,294	11,849,915	40,077,469
1911	97,167,687	45,687,915	15,021,307	36,458,465
1912	102,762,809	46,932,577	17,299,773	38,530,459
1912	102,131,478	46,766,349	17,127,440	38,237,689
1913	111,350,613	52,255,596	18,057,343	41,037,674

* Figures following the break cover railways with annual operating revenues above $100,000. See page 8.

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TABLE 29—Continued.

*Compensation of Firemen.**

Year.	United States.	Eastern District.	Southern District.	Western District.
1903	$37,484,283	$17,877,765	$4,216,619	$15,389,899
1904	40,463,040	18,931,430	4,436,611	17,094,999
1905	41,701,463	19,400,153	4,710,690	17,590,620
1906	44,247,306	20,631,902	5,257,405	18,357,999
1907	52,474,059	23,530,616	6,266,772	22,676,671
1908	50,747,825	22,277,144	5,953,609	22,517,072
1909	48,294,077	21,323,360	5,321,310	21,649,407
1910	55,626,502	23,855,272	6,047,565	25,723,665
1911	59,825,811	27,904,846	8,094,831	23,826,134
1912	62,117,000	28,746,237	9,217,396	24,153,367
1912	61,731,229	28,639,433	9,123,705	23,968,091
1913	67,238,331	31,477,579	10,002,521	25,758,231

*Compensation of Conductors.**

1903	$39,932,537	$20,107,915	$4,741,402	$15,083,220
1904	44,150,760	21,372,189	5,032,600	17,745,971
1905	44,758,533	21,438,926	5,195,360	18,124,247
1906	47,417,403	22,842,639	6,049,094	18,525,670
1907	55,847,244	25,999,254	7,446,308	22,401,682
1908	55,479,055	25,459,125	7,008,278	23,011,652
1909	51,873,772	23,364,582	6,629,923	21,879,267
1910	59,716,891	26,980,714	7,294,887	25,441,290
1911	65,793,064	31,475,164	10,539,424	23,778,476
1912	68,695,203	32,077,717	11,644,315	24,973,171
1912	68,219,798	31,942,252	11,524,899	24,752,647
1913	73,261,603	34,299,911	12,328,225	26,633,467

*Compensation of Other Trainmen.**

1903	$66,221,636	$36,744,567	$6,127,738	$23,349,331
1904	75,521,384	39,066,367	7,174,838	29,280,179
1905	77,416,200	39,632,078	7,630,058	30,154,064
1906	81,884,828	42,391,837	8,773,020	30,719,971
1907	99,978,356	49,479,839	11,025,734	39,472,783
1908	97,456,690	47,319,175	10,788,047	39,349,468
1909	89,710,526	42,168,671	9,201,597	38,340,258
1910	109,664,112	49,952,155	10,536,810	49,175,147
1911	120,665,943	59,395,230	15,039,734	46,230,979
1912	127,060,109	62,369,067	16,893,390	47,797,652
1912	126,557,319	62,203,953	16,765,332	47,588,034
1913	139,409,443	68,497,086	18,732,841	52,179,516

* Figures following the break cover railways with annual operating revenues above $100,000. See page 3.

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TABLE 29—Continued.

*Compensation of Machinists.**

Year.	United States.	Eastern District.	Southern District.	Western District.
1903	$33,414,954	$17,309,980	$3,489,691	$12,615,283
1904	37,844,571	18,215,488	4,019,916	15,109,167
1905	37,495,267	18,426,289	4,105,408	14,963,570
1906	40,326,031	21,059,438	4,840,313	14,426,280
1907	46,475,695	23,354,677	5,271,563	17,849,455
1908	42,368,436	21,433,508	4,635,951	16,298,977
1909	41,731,839	19,966,545	4,415,081	17,350,213
1910	48,589,476	23,756,705	5,365,691	19,467,080
1911	51,442,148	26,759,959	6,837,972	17,844,217
1912	54,327,638	28,628,347	7,611,387	18,087,904
1912	54,137,798	28,581,117	7,548,032	18,008,649
1913	60,008,941	31,527,844	7,575,514	20,905,583

*Compensation of Carpenters.**

1903	$35,526,545	$15,958,500	$5,133,440	$14,434,605
1904	36,654,270	15,911,760	5,296,743	15,445,767
1905	36,501,025	16,185,099	5,456,513	14,859,413
1906	40,961,083	19,186,374	6,359,591	15,415,118
1907	49,082,659	21,878,135	6,864,980	20,339,544
1908	44,552,855	19,179,500	6,809,861	18,563,494
1909	43,420,646	18,516,139	5,874,567	19,029,940
1910	50,058,065	21,268,538	6,549,239	22,240,288
1911	49,892,732	22,284,018	8,470,764	19,137,950
1912	53,241,527	23,420,045	10,006,928	19,814,554
1912	53,098,957	23,376,981	9,973,463	19,748,513
1913	61,318,197	26,812,392	11,137,815	23,367,990

*Compensation of Other Shopmen.**

1903	$84,133,168	$37,769,217	$11,425,552	$34,938,399
1904	94,463,049	41,582,311	11,808,912	41,071,826
1905	101,164,035	42,822,583	13,392,544	44,948,908
1906	111,524,564	51,049,849	15,275,904	45,198,811
1907	132,421,765	55,963,718	17,843,245	58,614,802
1908	121,695,515	53,253,122	14,735,782	53,706,611
1909	119,909,837	52,166,318	13,051,143	54,692,376
1910	145,457,974	60,655,730	16,562,871	68,239,373
1911	155,438,461	65,186,298	25,367,658	64,884,505
1912	167,807,528	71,408,610	29,606,131	66,792,787
1912	167,511,163	71,314,796	29,547,999	66,648,368
1913	191,645,024	82,702,156	32,802,750	76,140,118

* Figures following the break cover railways with annual operating revenues above $100,000. See page 3.

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TABLE 29—Continued.

*Compensation of Section Foremen.**

Year.	United States.	Eastern District.	Southern District.	Western District.
1903	$21,430,984	$7,976,168	$2,912,010	$10,542,806
1904	22,555,363	8,058,287	3,094,433	11,402,643
1905	23,041,754	8,223,602	3,109,671	11,708,481
1906	23,519,671	8,606,374	3,353,771	11,559,526
1907	26,326,635	9,243,909	3,651,305	13,431,421
1908	27,658,733	9,607,972	3,731,159	14,319,602
1909	27,405,664	9,523,389	3,717,091	14,165,184
1910	29,424,298	9,870,196	3,924,091	15,630,011
1911	31,268,187	11,276,108	4,874,099	15,117,980
1912	31,758,239	11,367,354	5,157,128	15,233,757
1912	31,220,226	11,217,803	5,010,091	14,992,332
1913	32,894,238	11,956,382	5,368,074	15,569,782

*Compensation of Other Trackmen.**

1903	$103,426,685	$41,614,849	$11,458,270	$50,353,566
1904	104,600,785	41,960,489	12,450,486	50,189,810
1905	103,413,280	43,332,199	12,287,899	47,793,182
1906	112,196,214	47,471,672	14,126,909	50,597,633
1907	135,793,476	51,966,475	16,313,258	67,513,743
1908	122,994,426	45,465,039	14,771,021	62,758,366
1909	110,769,229	40,066,897	13,075,181	57,627,151
1910	140,200,782	50,926,362	14,687,812	74,586,608
1911	137,893,137	54,809,686	18,027,462	65,055,989
1912	136,067,014	54,606,873	19,586,959	61,873,182
1912	134,387,444	54,174,860	19,117,192	61,095,392
1913	156,806,395	62,591,225	21,151,020	73,064,150

*Compensation of Switch Tenders, Crossing Tenders, and Watchmen.**

1903	$27,162,555	$13,774,363	$3,082,740	$10,305,452
1904	26,920,495	13,859,983	2,608,224	10,452,288
1905	26,355,957	14,129,406	2,597,025	9,629,526
1906	27,939,001	13,735,029	3,313,489	10,890,483
1907	32,184,636	16,213,339	3,058,402	12,912,895
1908	27,607,830	14,754,405	2,514,526	10,338,899
1909	25,521,433	14,211,453	2,258,519	9,051,461
1910	24,880,701	15,370,983	2,432,643	7,077,075
1911	22,835,972	15,415,134	2,372,367	5,048,471
1912	22,982,964	15,146,139	2,356,840	5,479,985
1912	22,879,796	15,111,181	2,334,746	5,433,869
1913	22,422,731	15,432,491	1,839,643	5,150,597

* Figures following the break cover railways with annual operating revenues above $100,000. See page 8.

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TABLE 29—Continued.

*Compensation of Telegraph Operators and Dispatchers.**

Year.	United States.	Eastern District.	Southern District.	Western District.
1903	$19,962,487	$9,620,705	$2,340,235	$8,001,547
1904	21,770,296	10,228,682	2,632,027	8,909,587
1905	22,638,034	10,500,268	2,831,148	9,306,618
1906	24,729,669	11,371,233	3,444,676	9,913,760
1907	29,058,251	12,721,050	4,254,934	12,082,267
1908	30,989,257	13,655,095	4,343,973	12,990,189
1909	29,896,851	13,819,080	3,861,414	12,216,357
1910	32,348,603	14,352,125	4,085,203	13,911,275
1911	34,398,705	16,543,259	4,715,263	13,140,183
1912	34,890,615	16,369,109	5,313,688	13,207,818
1912	34,858,621	16,353,184	5,306,012	13,199,425
1913	36,519,803	16,999,331	5,533,207	13,987,265

*Compensation of All Other Employees and Laborers.**

(Including floating equipment employees.)

1903	$89,236,078	$42,533,720	$8,289,341	$38,413,017
1904	95,277,542	43,000,358	8,172,817	44,104,367
1905	100,507,763	46,061,906	8,624,956	45,820,901
1906	108,190,829	50,683,599	10,189,397	47,317,833
1907	135,587,366	60,689,803	13,637,253	61,260,310
1908	136,923,550	59,576,380	14,806,458	62,540,712
1909	129,498,867	52,510,801	14,243,454	62,744,612
1910	144,677,841	61,037,090	15,815,546	67,825,205
1911	155,768,835	71,740,404	19,388,479	64,639,952
1912	156,846,842	69,176,288	18,478,203	69,192,351
1912	156,534,809	69,077,674	18,416,508	69,040,627
1913	172,476,864	78,628,329	20,761,761	73,086,774

* Figures following the break cover railways with annual operating revenues above $100,000. See page 8.

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TABLE 30.

AVERAGE DAILY COMPENSATION OF EMPLOYEES.

*Average Daily Compensation of All Employees.**

Year.	United States.	Eastern District.	Southern District.	Western District.
1903	$1.99	$1.99	$1.65	$2.11
1904	2.05	2.05	1.72	2.17
1905	2.07	2.06	1.78	2.18
1906	2.08	2.09	1.82	2.17
1907	2.20	2.20	1.93	2.29
1908	2.25	2.26	1.94	2.34
1909	2.24	2.26	1.96	2.30
1910	2.29	2.31	2.00	2.36
1911	2.39	2.46	2.14	2.42
1912	2.42	2.48	2.20	2.46
1912	2.43	2.49	2.20	2.46
1913	2.49	2.54	2.28	2.52

*Average Daily Compensation of General and Other Officers.**

1903	$7.98	$8.85	$5.37	$9.01
1904	8.35	8.64	6.35	9.14
1905	8.32	8.55	6.36	9.11
1906	8.08	7.99	6.65	8.92
1907	8.16	8.25	6.32	9.08
1908	8.44	8.93	6.10	9.33
1909	8.45	8.97	6.43	8.99
1910	8.35	9.19	6.62	8.44
1911	8.22	9.13	6.53	8.29
1912	8.33	9.07	6.45	8.75
1912	8.68	9.30	6.72	9.21
1913	8.80	9.36	6.76	9.50

*Average Daily Compensation of General Office Clerks.**

1903	$2.21	$2.33	$1.90	$2.21
1904	2.22	2.32	2.00	2.20
1905	2.24	2.36	2.05	2.19
1906	2.24	2.31	2.07	2.23
1907	2.30	2.36	2.13	2.30
1908	2.33	2.41	2.10	2.34
1909	2.31	2.44	2.17	2.22
1910	2.40	2.52	2.22	2.35
1911	2.49	2.56	2.39	2.44
1912	2.50	2.57	2.41	2.45
1912	2.50	2.57	2.42	2.46
1913	2.51	2.57	2.41	2.48

* Figures following the break cover railways with annual operating revenues above $100,000. See page 8.

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TABLE 30—Continued.

*Average Daily Compensation of Station Agents.**

Year.	United States.	Eastern District.	Southern District.	Western District.
1903	$1.87	$1.84	$1.58	$2.03
1904	1.93	1.90	1.62	2.09
1905	1.93	1.90	1.66	2.08
1906	1.94	1.94	1.67	2.07
1907	2.05	2.04	1.76	2.18
1908	2.09	2.10	1.78	2.21
1909	2.08	2.08	1.82	2.19
1910	2.12	2.14	1.84	2.20
1911	2.17	2.24	1.93	2.24
1912	2.20	2.26	1.98	2.26
1912	2.22	2.28	2.00	2.28
1913	2.28	2.36	2.06	2.31

*Average Daily Compensation of Other Station Men.**

1903	$1.64	$1.73	$1.13	$1.73
1904	1.69	1.77	1.26	1.77
1905	1.71	1.77	1.37	1.76
1906	1.69	1.75	1.39	1.74
1907	1.78	1.82	1.47	1.85
1908	1.82	1.88	1.47	1.88
1909	1.82	1.87	1.49	1.87
1910	1.84	1.91	1.50	1.88
1911	1.89	1.97	1.61	1.91
1912	1.89	1.97	1.62	1.91
1912	1.89	1.97	1.62	1.92
1913	1.96	2.04	1.75	1.94

*Average Daily Compensation of Enginemen.**

1903	$4.01	$3.91	$4.16	$4.09
1904	4.10	3.97	4.23	4.22
1905	4.12	3.96	4.27	4.26
1906	4.12	3.98	4.33	4.23
1907	4.30	4.15	4.57	4.36
1908	4.45	4.30	4.52	4.59
1909	4.44	4.29	4.45	4.61
1910	4.55	4.39	4.63	4.70
1911	4.79	4.71	4.85	4.90
1912	5.00	4.82	5.27	5.13
1912	5.02	4.83	5.32	5.15
1913	5.20	5.06	5.51	5.25

* Figures following the break cover railways with annual operating revenues above $100,000. See page 8.

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TABLE 30—Continued.

*Average Daily Compensation of Firemen.**

Year.	United States.	Eastern District.	Southern District.	Western District.
1903	$2.28	$2.23	$1.97	$2.46
1904	2.35	2.29	2.04	2.54
1905	2.38	2.32	2.00	2.58
1906	2.42	2.37	2.08	2.60
1907	2.54	2.47	2.26	2.70
1908	2.64	2.56	2.23	2.87
1909	2.67	2.58	2.24	2.90
1910	2.74	2.63	2.32	2.98
1911	2.94	2.88	2.57	3.22
1912	3.02	2.94	2.81	3.25
1912	3.20	2.95	2.84	3.26
1913	3.13	3.03	3.02	3.33

*Average Daily Compensation of Conductors.**

1903	$3.38	$3.29	$3.22	$3.56
1904	3.50	3.34	3.22	3.81
1905	3.50	3.34	3.22	3.82
1906	3.51	3.33	3.32	3.84
1907	3.69	3.48	3.67	3.98
1908	3.81	3.59	3.65	4.14
1909	3.81	3.58	3.56	4.19
1910	3.91	3.71	3.63	4.27
1911	4.16	4.03	4.00	4.46
1912	4.29	4.11	4.25	4.61
1912	4.30	4.12	4.29	4.64
1913	4.39	4.17	4.49	4.69

*Average Daily Compensation of Other Trainmen.**

1903	$2.17	$2.18	$1.69	$2.33
1904	2.27	2.24	1.76	2.48
1905	2.31	2.28	1.81	2.52
1906	2.35	2.36	1.89	2.50
1907	2.54	2.53	2.08	2.72
1908	2.60	2.60	2.06	2.79
1909	2.59	2.57	2.03	2.80
1910	2.69	2.68	2.08	2.87
1911	2.88	2.94	2.43	3.00
1912	2.96	3.00	2.57	3.11
1912	2.97	3.00	2.59	3.12
1913	3.04	3.05	2.78	3.13

* Figures following the break cover railways with annual operating revenues above $100,000. See page 8.

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TABLE 30—Continued.

*Average Daily Compensation of Machinists.**

Year.	United States.	Eastern District.	Southern District.	Western District.
1903	$2.50	$2.37	$2.52	$2.70
1904	2.61	2.46	2.59	2.82
1905	2.65	2.47	2.66	2.92
1906	2.69	2.55	2.74	2.90
1907	2.87	2.68	2.87	3.15
1908	2.95	2.78	2.94	3.23
1909	2.98	2.79	2.85	3.26
1910	3.08	2.90	2.93	3.38
1911	3.14	2.98	3.09	3.47
1912	3.21	3.04	3.24	3.56
1912	3.21	3.04	3.25	3.57
1913	3.26	3.09	3.28	3.55

*Average Daily Compensation of Carpenters.**

1903	$2.19	$2.16	$1.89	$2.35
1904	2.26	2.23	1.97	2.41
1905	2.25	2.24	2.00	2.38
1906	2.28	2.33	2.03	2.33
1907	2.40	2.43	2.16	2.45
1908	2.40	2.42	2.16	2.47
1909	2.43	2.42	2.21	2.52
1910	2.51	2.51	2.23	2.59
1911	2.54	2.60	2.37	2.56
1912	2.55	2.63	2.38	2.57
1912	2.55	2.62	2.38	2.56
1913	2.63	2.70	2.47	2.62

*Average Daily Compensation of Other Shopmen.**

1903	$1.86	$1.86	$1.59	$1.99
1904	1.91	1.88	1.62	2.06
1905	1.92	1.90	1.65	2.05
1906	1.92	1.93	1.66	2.01
1907	2.06	2.05	1.76	2.18
1908	2.12	2.11	1.84	2.22
1909	2.13	2.11	1.84	2.23
1910	2.18	2.18	1.90	2.27
1911	2.24	2.29	1.98	2.31
1912	2.24	2.28	1.96	2.34
1912	2.24	2.29	1.97	2.34
1913	2.31	2.36	2.09	2.37

* Figures following the break cover railways with annual operating revenues above $100,000. See page 8.

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TABLE 30—Continued.

*Average Daily Compensation of Section Foremen.**

Year.	United States.	Eastern District.	Southern District.	Western District.
1903	$1.78	$1.83	$1.58	$1.79
1904	1.78	1.87	1.61	1.78
1905	1.79	1.88	1.62	1.78
1906	1.80	1.89	1.68	1.77
1907	1.90	1.99	1.73	1.89
1908	1.95	2.04	1.75	1.96
1909	1.96	2.04	1.78	1.96
1910	1.99	2.09	1.81	1.98
1911	2.07	2.17	1.92	2.05
1912	2.09	2.18	1.96	2.08
1912	2.09	2.18	1.96	2.08
1913	2.14	2.25	2.03	2.11

*Average Daily Compensation of Other Trackmen.**

1903	$1.31	$1.33	$0.96	$1.40
1904	1.33	1.36	1.01	1.41
1905	1.32	1.36	1.04	1.37
1906	1.36	1.42	1.07	1.41
1907	1.46	1.50	1.15	1.52
1908	1.45	1.54	1.14	1.48
1909	1.38	1.49	1.12	1.38
1910	1.47	1.56	1.15	1.49
1911	1.50	1.63	1.21	1.49
1912	1.50	1.64	1.24	1.48
1912	1.50	1.64	1.24	1.48
1913	1.58	1.69	1.28	1.61

*Average Daily Compensation of Switch Tenders, Crossing Tenders, and Watchmen.**

1903	$1.76	$1.59	$1.56	$2.18
1904	1.77	1.63	1.53	2.10
1905	1.79	1.66	1.67	2.06
1906	1.80	1.62	1.76	2.12
1907	1.87	1.68	1.64	2.26
1908	1.78	1.63	1.44	2.18
1909	1.73	1.61	1.40	2.11
1910	1.69	1.65	1.40	1.91
1911	1.74	1.75	1.48	1.85
1912	1.70	1.73	1.38	1.81
1912	1.70	1.72	1.39	1.81
1913	1.70	1.75	1.27	1.78

* Figures following the break cover railways with annual operating revenues above $100,000. See page 3.

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TABLE 30—Continued.

*Average Daily Compensation of Telegraph Operators and Dispatchers.**

Year.	United States.	Eastern District.	Southern District.	Western District.
1903	$2.08	$2.04	$1.78	$2.23
1904	2.15	2.10	1.85	2.32
1905	2.19	2.13	2.00	2.34
1906	2.18	2.04	2.04	2.28
1907	2.26	2.17	2.16	2.40
1908	2.30	2.22	2.13	2.45
1909	2.30	2.20	2.15	2.48
1910	2.33	2.23	2.19	2.49
1911	2.44	2.36	2.30	2.61
1912	2.47	2.38	2.36	2.63
1912	2.47	2.39	2.37	2.63
1913	2.52	2.42	2.43	2.70

*Average Daily Compensation of All Other Employees and Laborers.**

(Including floating equipment employees.)

1903	$1.78	$1.70	$1.39	$2.02
1904	1.83	1.76	1.51	1.99
1905	1.85	1.76	1.55	2.02
1906	1.84	1.79	1.57	1.98
1907	1.93	1.86	1.67	2.08
1908	1.99	1.91	1.69	2.16
1909	1.99	1.92	1.77	2.12
1910	2.02	1.93	1.79	2.17
1911	2.09	2.10	1.88	2.19
1912	2.11	2.11	1.89	2.20
1912	2.12	2.12	1.89	2.20
1913	2.17	2.16	1.91	2.26

* Figures following the break cover railways with annual operating revenues above $100,000. See page 8.

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VI. EQUIPMENT.

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TABLE 31. **NUMBER OF LOCOMOTIVES.***

Year.	United States.		Eastern District.		Southern District.		Western District.	
	Number.	Per 1,000 miles of line.	Number.	Per 1,000 miles of line.	Number.	Per 1,000 miles of line.	Number.	Per 1,000 miles of line.
1903....	43,871	214	20,510	373	5,309	151	18,052	157
1904....	46,743	220	21,547	384	5,792	161	19,404	161
1905....	48,357	223	22,247	393	6,162	166	19,948	162
1906....	51,672	232	23,953	416	6,668	174	21,051	166
1907....	55,388	243	25,029	431	7,400	189	22,959	176
1908....	56,733	246	25,256	437	7,727	193	23,750	179
1909....	57,212	243	25,311	437	7,772	188	24,129	177
1910....	58,947	245	25,898	446	7,802	186	25,247	179
1911....	61,327	249	28,233	442	9,661	205	23,433	174
1912....	62,262	249	28,267	440	10,086	209	23,909	174
1912....	61,276	255	28,031	450	9,769	215	23,476	177
1913....	63,378	259	28,659	457	10,246	222	24,473	180

TABLE 32. **TRACTIVE POWER OF LOCOMOTIVES.***

Year.	United States.		Eastern District.		Southern District.		Western District.	
	Aggregate tractive power.	Average tractive power per locomotive.	Aggregate tractive power.	Average tractive power per locomotive.	Aggregate tractive power.	Average tractive power per locomotive.	Aggregate tractive power.	Average tractive power per locomotive.
	(pounds)	(pounds)	(pounds)	(pounds)	(pounds)	(pounds)	(pounds)	(pounds)
1903...	941,915,540	21,781	.....	.....	.....	.....	.....	.....
1904...	1,052,307,261	22,804	.....	.....	.....	.....	.....	.....
1905...	1,128,771,082	23,666	.....	.....	.....	.....	.....	.....
1906...	1,260,633,673	24,741	.....	.....	.....	.....	.....	.....
1907...	1,409,006,658	25,823	.....	.....	.....	.....	.....	.....
1908...	1,477,756,536	26,384	.....	.....	.....	.....	.....	.....
1909...	1,503,971,444	26,634	.....	.....	.....	.....	.....	.....
1910...	1,588,894,480	27,282	.....	.....	.....	.....	.....	.....
1911...	1,681,495,905	27,949	805,151,361	28,884	257,268,117	27,320	619,076,427	27,069
1912...	1,746,964,128	28,634	827,056,235	29,702	277,923,237	28,264	641,984,656	27,515
1912...	1,735,466,148	28,766	824,520,356	29,774	274,488,809	28,518	636,456,983	27,656
1913...	1,847,798,393	29,702	867,533,046	30,658	291,181,129	29,168	689,084,218	28,795

* Figures following the break cover railways with annual operating revenues above $100,000. See page 8.

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TABLE 33.

NUMBER OF CARS—ALL KINDS.*

Year.	United States.		Eastern District.		Southern District.		Western District.	
	Number.	Per 1,000 miles of line.	Number.	Per 1,000 miles of line.	Number.	Per 1,000 miles of line.	Number.	Per 1,000 miles of line.
1903....	1,753,389	8,540	864,262	15,702	200,586	5,688	688,541	5,987
1904....	1,798,561	8,474	870,659	15,536	210,572	5,843	717,330	5,970
1905....	1,842,871	8,494	880,140	15,555	226,191	6,096	736,540	5,974
1906....	1,958,912	8,810	933,024	16,221	251,366	6,573	774,522	6,119
1907....	2,126,594	9,350	1,003,150	17,277	293,230	7,506	830,214	6,370
1908....	2,231,181	9,680	1,048,873	18,161	307,110	7,664	875,198	6,597
1909....	2,218,280	9,423	1,032,172	17,820	308,807	7,482	877,301	6,441
1910....	2,290,331	9,510	1,062,844	18,291	313,834	7,483	913,653	6,490
1911....	2,359,335	9,586	1,151,283	18,010	405,778	8,606	802,274	5,940
1912....	2,382,674	9,536	1,160,521	18,053	410,260	8,523	811,893	5,907
1912....	2,368,942	9,853	1,156,611	18,575	406,942	8,963	805,389	6,068
1913....	2,445,508	10,005	1,185,603	18,916	412,812	8,943	847,093	6,248

TABLE 34.

NUMBER OF PASSENGER-SERVICE CARS.*

Year.	United States.		Eastern District.		Southern District.		Western District.	
	Number.	Per 1,000 miles of line.	Number.	Per 1,000 miles of line.	Number.	Per 1,000 miles of line.	Number.	Per 1,000 miles of line.
1903....	38,140	186	20,342	370	4,255	121	13,543	118
1904....	39,752	187	20,960	374	4,370	121	14,422	120
1905....	40,713	188	21,287	376	4,595	124	14,831	120
1906....	42,262	190	21,853	380	4,861	127	15,548	123
1907....	43,973	193	22,520	388	5,164	132	16,289	125
1908....	45,117	196	23,096	400	5,219	130	16,802	127
1909....	45,584	193	23,141	400	5,315	129	17,128	126
1910....	47,095	195	23,230	400	5,500	131	18,365	130
1911....	49,818	208	24,974	391	6,584	140	18,260	135
1912....	51,490	206	25,709	400	6,846	142	18,935	138
1912....	50,575	210	25,401	408	6,566	145	18,608	140
1913....	51,700	211	25,771	411	6,865	149	19,064	141

* Figures following the break cover railways with annual operating revenues above $100,000. See page 8.

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TABLE 35.

NUMBER OF FREIGHT CARS.*

Year.	United States.		Eastern District.		Southern District.		Western District.	
	Number.	Per 1,000 miles of line.	Number.	Per 1,000 miles of line.	Number.	Per 1,000 miles of line.	Number.	Per 1,000 miles of line.
1903....	1,653,782	8,055	819,978	14,897	189,174	5,364	644,630	5,605
1904....	1,692,194	7,973	824,523	14,712	198,114	5,497	669,557	5,572
1905....	1,731,409	7,980	831,315	14,692	212,268	5,721	687,826	5,579
1906....	1,837,914	8,266	879,472	15,290	236,148	6,175	722,294	5,706
1907....	1,991,557	8,756	945,841	16,290	276,250	7,071	769,466	5,904
1908....	2,089,302	9,064	990,316	17,147	288,648	7,203	810,338	6,108
1909....	2,073,606	8,809	973,921	16,814	290,093	7,029	809,592	5,944
1910....	2,135,121	8,866	1,002,305	17,249	294,617	7,024	838,199	5,954
1911....	2,195,511	8,920	1,085,110	16,975	382,189	8,105	728,212	5,392
1912....	2,215,549	8,867	1,092,092	16,988	385,781	8,015	737,676	5,367
1912....	2,203,423	9,165	1,088,699	17,484	382,943	8,435	731,781	5,513
1913....	2,273,564	9,302	1,116,380	17,812	387,522	8,395	769,662	5,677

TABLE 36.

CAPACITY OF FREIGHT CARS—UNITED STATES.*

Year.	Aggregate capacity.	Average capacity per freight car.
	(tons)	(tons)
1903	48,530,281	29
1904	50,759,133	30
1905	53,255,083	31
1906	59,059,302	32
1907	67,033,324	34
1908	72,663,665	35
1909	73,137,546	35
1910	76,578,735	36
1911	81,077,028	37
1912	82,965,418	37
1912	.....	..
1913	86,978,145	38

* Figures following the break cover railways with annual operating revenues above $100,000. See page 3.

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TABLE 37. **NUMBER OF CARS BY CLASSES—UNITED STATES.***

Year.	Passenger.		Dining, parlor, and sleeping.		Baggage, express, and postal.		Other passenger.		Box.		Flat.	
	Number.	Per 1,000 miles of line.	Number.	Per 1,000 miles of line.	Number.	Per 1,000 miles of line.	Number.	Per 1,000 miles. of line	Number.	Per 1,000 miles of line	Number.	Per 1,000 miles of line
1903.....	26,751	130	1,492	7	8,945	44	952	5	766,978	3,736	154,809	754
1904.....	27,766	131	1,586	7	9,345	44	1,055	5	782,897	3,689	147,620	696
1905.....	28,213	130	1,767	8	9,450	44	1,283	6	804,379	3,707	146,716	676
1906.....	29,110	131	1,903	9	9,892	44	1,357	6	844,936	3,800	147,900	665
1907.....	29,960	132	2,000	9	10,379	45	1,634	7	906,687	3,986	158,222	696
1908.....	30,285	131	1,991	9	10,864	47	1,977	9	950,095	4,122	160,076	694
1909.....	30,960	131	1,948	8	10,997	47	1,679	7	942,373	4,003	154,809	658
1910a....	31,675	131	2,074	9	11,524	48	1,802	7	966,603	4,014	153,958	639
1911.....	32,946	134	2,422	10	12,269	50	2,181	9	990,324	4,024	153,320	623
1912.....	33,856	136	2,505	10	12,766	51	2,363	9	1,004,030	4,019	150,898	604
1912.....	33,089	138	2,496	10	12,704	53	2.286	10	1,002,582	4,170	146,153	608
1913.....	33,672	138	2,393	10	12,943	53	2,692	11	1,032,737	4,225	147,604	604

Year.	Stock.		Coal.		Tank.		Refrigerator.		Other freight.		Company service.	
	Number.	Per 1,000 miles of line.	Number	Per 1,000 miles of line.	Number	Per 1,000 miles of line.	Number.	Per 1,000 miles. of line	Number.	Per 1,000 miles of line	Number.	Per 1,000 miles of line
1903.....	61,909	302	596,622	2,906	4,430	21	21,465	104	47,569	232	61,467	299
1904.....	64,534	304	623,002	2,935	4,521	21	22,758	107	46,862	221	66,615	314
1905.....	63,407	292	632,913	2,917	5,163	24	26,847	124	51,984	240	70,749	326
1906.....	64,462	290	687,457	3,092	5,326	24	31,795	143	56,038	252	78,736	354
1907.....	70,416	310	748,123	3,289	5,974	26	33,644	148	68,491	301	91,064	400
1908.....	76,519	332	798,911	3,466	6,698	29	27,953	121	69,050	300	96,762	420
1909.....	73,661	313	792,499	3,367	6,631	28	28,210	120	75,423	320	99,090	421
1910a....	78,811	327	818,731	3,400	7,434	31	30,918	128	78,666	327	108,115	449
1911.....	77,590	315	853,719	3,469	7,787	32	31,786	129	80,985	328	114,006	463
1912.....	76,536	306	855,112	3,422	7,836	31	30,693	123	90,444	362	115,635	463
1912.....	76,423	318	852,759	3,547	7,795	32	30,686	128	87,025	362	114,944	478
1913.....	78,308	320	871,379	3,565	8,216	34	43,389	178	91,931	376	120,244	492

* Figures following the break cover railways with annual operating revenues above $100,000. See page 3.
(a) Excludes 20 cars unclassified.

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VII. FREIGHT TRAFFIC STATISTICS.

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TABLE 38. **FREIGHT TRAFFIC MOVEMENT.**

*Total Freight Tonnage.**

(Exclusive of tonnage unassigned to commodity groups.)

Year.	United States.		Easetrn District.		Southern District.		Western District.	
	Tonnage originating on line.	Per cent of total.	Tonnage originating on line.	Per cent of total.	Tonnage originating on line.	Per cent of total.	Tonnage originating on line.	Per cent of total.
	(tons)		(tons)		(tons)		(tons)	
1903	638,800,658	100.00	344,863,942	100.00	85,854,746	100.00	208,081,970	100.00
1904	641,680,547	100.00	345,874,297	100.00	88,846,457	100.00	206,959,793	100.00
1905	715,663,442	100.00	387,987,570	100.00	93,959,210	100.00	233,716,662	100.00
1906	820,164,627	100.00	448,521,985	100.00	104,827,715	100.00	266,814,927	100.00
1907	893,184,972	100.00	481,601,404	100.00	115,580,170	100.00	296,003,398	100.00
1908	797,216,099	100.00	424,622,558	100.00	113,653,075	100.00	258,940,466	100.00
1909	826,492,765	100.00	408,649,701	100.00	120,793,459	100.00	297,049,605	100.00
1910	968,464,009	100.00	471,213,275	100.00	146,028,659	100.00	351,222,075	100.00
1911	967,233,991	100.00	493,763,010	100.00	166,984,047	100.00	306,486,934	100.00
1912	998,282,525	100.00	511,970,609	100.00	171,717,393	100.00	314,594,523	100.00
1912	979,370,603	100.00	.....	.....	.....	.....	.....	.....
1913	1,144,840,303	100.00	578,382,786	100.00	178,688,390	100.00	387,769,127	100.00
*Products of Agriculture.**								
1903	61,056,212	9.56	18,944,504	5.49	6,854,473	7.98	35,257,235	16.95
1904	61,512,543	9.59	18,791,159	5.43	6,825,965	7.68	35,895,419	17.34
1905	64,637,035	9.03	19,621,041	5.06	7,601,561	8.09	37,414,433	16.01
1906	70,201,720	8.56	21,201,316	4.73	7,879,171	7.52	41,121,233	15.41
1907	77,030,071	8.62	22,021,732	4.57	8,785,323	7.60	46,223,016	15.62
1908	69,665,943	8.74	21,372,569	5.03	8,971,647	7.89	39,321,727	15.19
1909	73,683,720	8.92	19,009,546	4.65	9,569,169	7.92	45,105,005	15.18
1910	78,736,587	8.13	20,814,209	4.42	9,913,080	6.79	48,009,298	13.67
1911	85,566,053	8.85	24,935,632	5.05	13,562,175	8.12	47,068,246	15.35
1912	90,776,489	9.09	26,041,392	5.09	14,918,163	8.68	49,816,934	15.84
1912	89,687,841	9.16	.....	....	.....	.....	.....	.....
1913	106,067,317	9.27	26,973.005	4.67	14,114,467	7.90	64,979,845	16.76

* Figures following the break cover railways with annual operating revenues above $100,000. See page 8.

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TABLE 38—Continued. *Products of Animals.**

Year.	United States.		Eastern District.		Southern District.		Western District.	
	Tonnage originating on line.	Per cent of total.	Tonnage originating on line.	Per cent of total.	Tonnage originating on line.	Per cent of total.	Tonnage originating on line.	Per cent of total.
	(tons)		(tons)		(tons)		(tons)	
1903	16,802,893	2.63	6,607,700	1.92	877,474	1.02	9,317,719	4.48
1904	17,576,078	2.74	7,095,626	2.05	846,256	0.95	9,634,196	4.66
1905	18,155,743	2.54	7,469,356	1.93	854,519	0.91	9,831,868	4.21
1906	19,002,825	2.32	7,457,802	1.66	906,456	0.86	10,638,567	3.99
1907	20,473,486	2.29	7,636,770	1.59	967,517	0.84	11,869,199	4.01
1908	19,635,150	2.46	7,635,961	1.80	939,489	0.83	11,059,700	4.27
1909	20,593,352	2.49	7,610,582	1.86	1,002,340	0.83	11,980,430	4.03
1910	20,294,144	2.10	7,402,683	1.57	1,083,606	0.74	11,807,855	3.36
1911	23,763,262	2.46	8,218,197	1.67	1,802,976	1.08	13,742,089	4.48
1912	24,974,171	2.50	8,894,392	1.74	2,314,127	1.35	13,765,652	4.38
1912	24,798,745	2.53	.....	....	.....	.....	.....	....
1913	26,446,382	2.31	8,926,737	1.54	2,598,745	1.46	14,920,900	3.85

*Products of Mines.**

1903	329,335,621	51.56	194,426,582	56.38	42,509,407	49.51	92,399,632	44.40
1904	330,872,195	51.56	201,621,522	58.29	43,743,364	49.24	85,507,309	41.32
1905	383,562,335	53.59	228,077,198	58.78	47,987,220	51.07	107,497,917	45.99
1906	435,450,476	53.09	261,966,505	58.41	53,432,008	50.97	120,051,963	44.99
1907	476,899,638	53.39	282,559,506	58.67	57,737,415	49.95	136,602,717	46.15
1908	444,216,023	55.72	265,747,801	62.58	57,779,823	50.84	120,688,399	46.61
1909	459,560,732	55.60	256,261,843	62.71	63,050,150	52.20	140,248,739	47.22
1910	544,604,373	56.23	291,210,129	61.80	79,201,479	54.24	174,192,765	49.60
1911	539,255,980	55.75	306,754,072	62.13	90,068,704	53.94	142,433,204	46.48
1912	566,538,387	56.75	315,581,446	61.64	97,535,577	56.80	153,421,364	48.77
1912	559,140,768	57.09	.....	.....	.....	.....	.....	.....
1913	650,940,253	56.86	359,230,979	62.11	101,003,003	56.52	190,706,271	49.18

* Figures following the break cover railways with annual operating revenues above $100,000. See page 8.

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TABLE 38—Continued.

*Products of Forests.**

Year.	United States.		Eastern District.		Southern District.		Western District.	
	Tonnage originating on line	Per cent of total.	Tonnage originating on line.	Per cent of total.	Tonnage originating on line.	Per cent of total.	Tonnage originating on line.	Per cent of total.
	(tons)		(tons)		(tons)		(tons)	
1903	74,559,980	11.67	23,116,850	6.70	18,004,361	20.97	33,438,769	16.07
1904	80,383,577	12.53	23,200,603	6.71	19,778,852	22.26	37,404,122	18.07
1905	80,436,863	11.24	24,388,412	6.29	19,072,521	20.30	36,975,930	15.82
1906	92,187,351	11.24	26,246,855	5.85	21,695,641	20.70	44,244,855	16.58
1907	101,617,724	11.38	26,777,103	5.56	25,493,975	22.06	49,346,646	16.67
1908	90,475,081	11.35	22,955,349	5.41	24,279,663	21.36	43,240,069	16.70
1909	97,104,700	11.75	21,553,953	5.28	25,304,631	20.95	50,246,116	16.92
1910	113,010,825	11.67	23,988,412	5.09	30,561,411	20.93	58,461,002	16.64
1911	108,506,272	11.22	23,031,539	4.66	30,495,686	18.26	54,979,047	17.94
1912	100,147,471	10.03	22,964,432	4.48	28,329,316	16.50	48,853,723	15.53
1912	91,358,705	9.33	.....	....	.....	.....	.....	.....
1913	112,079,164	9.79	23,431,387	4.05	30,789,088	17.23	57,858,689	14.92
			*Manufactures.**					
1903	91,980,903	14.39	64,278,932	18.64	9,696,729	11.30	18,005,242	8.65
1904	86,088,583	13.41	59,199,548	17.12	10,261,415	11.55	16,627,620	8.03
1905	97,332,768	13.60	68,555,629	17.67	10,382,738	11.05	18,394,401	7.87
1906	121,458,738	14.81	85,865,077	19.15	12,198,479	11.63	23,395,182	8.77
1907	137,621,443	15.41	95,880,756	19.91	13,336,596	11.54	28,404,091	9.60
1908	104,860,269	13.15	68,605,936	16.16	12,213,459	10.75	24,040,874	9.28
1909	108,677,129	13.15	70,084,904	17.15	13,399,659	11.09	25,192,566	8.48
1910	139,678,391	14.42	90,419,841	19.19	16,302,043	11.16	32,956,507	9.38
1911	135,175,536	13.97	91,853,664	18.60	18,259,594	10.94	25,062,278	8.18
1912	139,948,653	14.02	93,951,237	18.35	18,646,669	10.86	27,350,747	8.69
1912	138,872,614	14.18	.....	.....	.....	.....	.....	....
1913	165,532,035	14.46	110,483,255	19.10	19,641,814	10.99	35,406,966	9.13

* Figures following the break cover railways with annual operating revenues above $100,000. See page 8.

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TABLE 38—Continued. *Merchandise.**

Year.	United States.		Eastern District.		Southern District.		Western District.	
	Tonnage originating on line.	Per cent of total.	Tonnage originating on line.	Per cent of total.	Tonnage originating on line.	Per cent of total.	Tonnage originating on line.	Per cent of total.
	(tons)		(tons)		(tons)		(tons)	
1903	29,949,022	4.69	15,761,549	4.57	3,786,777	4.41	10,400,696	5.00
1904	30,986,689	4.83	16,413,343	4.75	3,442,496	3.88	11,130,850	5.38
1905	30,921,538	4.32	17,245,254	4.44	3,561,354	3.79	10,114,930	4.33
1906	33,319,615	4.06	17,731,963	3.95	3,696,235	3.53	11,891,417	4.46
1907	34,718,487	3.89	17,553,982	3.64	4,987,225	4.31	12,177,280	4.11
1908	32,222,678	4.04	14,402,311	3.39	5,661,663	4.98	12,158,704	4.69
1909	33,975,628	4.11	13,539,555	3.31	4,806,660	3.98	15,629,413	5.26
1910	35,718,413	3.69	13,780,911	2.92	5,188,786	3.55	16,748,716	4.77
1911	36,519,321	3.77	15,221,958	3.08	7,495,940	4.49	13,801,423	4.50
1912	38,329,467	3.84	16,689,086	3.26	6,938,705	4.04	14,701,676	4.67
1912	38,118,092	3.89	.....	....	.....	.....	.....	.....
1913	42,520,369	3.71	17,951,771	3.10	7,312,038	4.09	17,256,560	4.45
	*Miscellaneous—Other Commodities.**							
1903	35,116,027	5.50	21,727,825	6.30	4,125,525	4.81	9,262,677	4.45
1904	34,260,882	5.34	19,552,496	5.65	3,948,109	4.44	10,760,277	5.20
1905	40,617,160	5.68	22,630,680	5.83	4,499,297	4.79	13,487,183	5.77
1906	48,543,902	5.92	28,052,467	6.25	5,019,725	4.79	15,471,710	5.80
1907	44,824,123	5.02	29,171,555	6.06	4,272,119	3.70	11,380,449	3.84
1908	36,140,955	4.54	23,902,631	5.63	3,807,331	3.35	8,430,993	3.26
1909	32,897,504	3.98	20,589,318	5.04	3,660,850	3.03	8,647,336	2.91
1910	36,421,276	3.76	23,597,090	5.01	3,778,254	2.59	9,045,932	2.58
1911	38,447,567	3.98	23,747,948	4.81	5,298,972	3.17	9,400,647	3.07
1912	37,567,887	3.77	27,848,624	5.44	3,034,836	1.77	6,684,427	2.12
1912	37,393,838	3.82	.....	....	.....	.....	.....	....
1913	41,254.783	3.60	31,385,652	5.43	3,229,235	1.81	6,639,896	1.71

* Figures following the break cover railways with annual operating revenues above $100,000. See page 3.

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TABLE 39.

REVENUE FREIGHT TRAIN-MILES.*

Year.	United States.		Eastern District.		Southern District.		Western District.	
	Number.	Per cent.	Number.	Per cent	Number.	Per cent.	Number.	Per cent.
1903.....	526,312,433	100.0	224,206,878	42.6	77,040,217	14.6	225,065,338	42.8
1904.....	535,090,971	100.0	229,044,260	42.8	79,857,548	14.9	226,189,163	42.3
1905.....	546,424,405	100.0	238,516,448	43.7	83,818,057	15.3	224,089,900	41.0
1906.....	594,005,825	100.0	257,009,827	43.3	91,536,627	15.4	245,459,371	41.3
1907.....	629,995,723	100.0	268,566,537	42.6	97,060,452	15.4	264,368,734	42.0
1908.....	587,218,454	100.0	249,772,923	42.5	90,769,104	15.5	246,676,427	42.0
1909.....	568,854,608	100.0	238,060,224	41.9	88,364,385	15.5	242,429,999	42.6
1910.....	635,450,681	100.0	265,248,045	41.7	96,367,381	15.2	273,835,255	43.1
1911.....	626,496,025	100.0	279,144,089	44.6	115,999,772	18.5	231,352,164	36.9
1912.....	612,345,112	100.0	271,567,377	44.4	116,612,893	19.0	224,164,842	36.6
1912.....	610,291,829	100.0	270,979,016	44.4	115,988,370	19.0	223,324,443	36.6
1913.....	643,841,292	100.0	284,010,552	44.1	119,540,732	18.6	240,290,008	37.3

TABLE 40.

REVENUE MIXED TRAIN-MILES.*

Year.	United States.		Eastern District.		Southern District.		Western District.	
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
1903.....	31,491,647	.....	.....	....	.....	....	.....	....
1904.....	31,973,615	.....	.....	....	.....	....	.....	....
1905.....	32,189,996	.....	.....	....	.....	....	.....	....
1906.....	32,833,713	.....	.....	....	.....	....	.....	....
1907.....	32,111,134	.....	.....	....	.....	....	.....	....
1908.....	34,866,036	100.0	6,951,875	19.9	7,115,372	20.4	20,798,789	59.7
1909.....	36,236,916	100.0	6,535,212	18.0	7,697,153	21.3	22,004,551	60.7
1910.....	35,807,207	100.0	6,653,964	18.6	7,982,004	22.3	21,171,239	59.1
1911.....	36,461,466	100.0	6,929,870	19.0	8,222,609	22.6	21,308,987	58.4
1912.....	37,127,992	100.0	6,970,478	18.8	8,118,498	21.9	22,039,016	59.3
1912.....	32,447,189	100.0	6,040.733	18.6	6,671,909	20.6	19,734,547	60.8
1913.....	32,907,378	100.0	6,107,515	18.6	6,385,084	19.4	20,414,779	62.0

* Figures following the break cover railways with annual operating revenues above $100,000. See page 8.

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TABLE 41.

FREIGHT TRAIN DENSITY.*

(Freight train-miles per mile of line.)

Year.	United States.	Eastern District.	Southern District.	Western District.
1903	2,596	4,103	2,205	1,989
1904	2,563	4,124	2,240	1,924
1905	2,546	4,236	2,292	1,841
1906	2,704	4,505	2,430	1,965
1907	2,801	4,647	2,511	2,058
1908	2,565	4,313	2,294	1,876
1909	2,442	4,116	2,173	1,803
1910	2,669	4,572	2,316	1,977
1911	2,573	4,571	2,604	1,678
1912	2,469	4,233	2,448	1,645
1912	2,562	4,360	2,577	1,703
1913	2,656	4,546	2,611	1,791

TABLE 42.

REVENUE FREIGHT CAR-MILES—ALL CARS.*

Year.	United States.		Eastern District.		Southern District.		Western District.	
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
1903	14,193,718,005	100.0	6,536,035,916	46.1	1,792,958,320	12.6	5,864,723,769	41.3
1904	14,353,650,056	100.0	6,551,593,612	45.6	1,904,151,504	13.3	5,897,904,940	41.1
1905	15,082,070,763	100.0	6,880,698,604	45.6	2,049,034,099	13.6	6,152,338,060	40.8
1906	16,589,958,024	100.0	7,542,136,642	45.5	2,232,511,971	13.4	6,815,309,411	41.1
1907	17,122,259,754	100.0	7,742,063,829	45.2	2,241,013,192	13.1	7,139,182,733	41.7
1908	16,857,003,236	100.0	7,717,714,619	45.8	2,209,971,420	13.1	6,929,317,197	41.1
1909	17,169,413,224	100.0	7,723,478,795	45.0	2,341,824,367	13.6	7,104,110,062	41.4
1910	18,981,573,779	100.0	8,496,839,034	44.8	2,582,694,657	13.6	7,902,040,088	41.6
1911	19,315,156,130	100.0	9,143,129,157	47.3	3,219,128,891	16.7	6,952,898,082	36.0
1912	19,466,402,067	100.0	9,194,305,032	47.2	3,303,828,793	17.0	6,968,268,242	35.8
1912	19,430,455,051	100.0	9,186,913,803	47.3	3,293,721,611	16.9	6,949,819,637	35.8
1913	21,034,670,482	100.0	9,863,978,080	46.9	3,477,619,131	16.5	7,693,073,271	36.6

* Figures following the break cover railways with annual operating revenues above $100,000. See page 3.

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TABLE 43. **REVENUE FREIGHT CAR-MILES—LOADED CARS.***

Year.	United States.		Eastern District.		Southern District.		Western District.	
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
1903.....	9,844,158,056	100.0	4,455,496,096	45.3	1,270,249,453	12.9	4,118,412,507	41.8
1904.....	9,849,576,535	100.0	4,428,914,883	45.0	1,307,219,684	13.3	4,113,441,968	41.7
1905.....	10,278,745,467	100.0	4,611,792,089	44.9	1,389,430,858	13.5	4,277,522,520	41.6
1906.....	11,410,599,327	100.0	5,077,798,229	44.5	1,539,456,847	13.5	4,793,344,251	42.0
1907.....	12,021,325,746	100.0	5,304,694,680	44.1	1,580,286,919	13.2	5,136,344,147	42.7
1908.....	11,128,231,436	100.0	4,963,060,582	44.6	1,446,179,940	13.0	4,718,990,914	42.4
1909.....	11,360,655,079	100.0	4,963,876,962	43.7	1,533,538,356	13.5	4,863,239,761	42.8
1910.....	12,851,294,922	100.0	5,669,740,976	44.1	1,735,560,323	13.5	5,445,993,623	42.4
1911.....	12,859,386,385	100.0	5,978,777,607	46.5	2,110,888,495	16.4	4,769,720,283	37.1
1912.....	13,088,331,845	100.0	6,093,812,851	46.5	2,182,659,980	16.7	4,811,859,014	36.8
1912.....	13,067,910,450	100.0	6,089,450,142	46.6	2,176,725,414	16.7	4,801,734,894	36.7
1913.....	14,271,944,094	100.0	6,603,325,705	46.3	2,334,594,658	16.3	5,334,023,731	37.4

TABLE 44. **FREIGHT CAR-MILES PER FREIGHT TRAIN-MILE.***

(Cars per train.)

Year.	United States.	Eastern District.	Southern District.	Western District.
1903.....	25.4	29.2	23.3	26.1
1904.....	25.3	28.6	23.8	26.1
1905.....	26.1	28.8	24.4	27.5
1906.....	26.5	29.3	24.4	27.8
1907.....	25.9	28.8	23.1	27.0
1908.....	27.1	30.1	22.6	25.9
1909.....	28.4	31.6	24.4	26.9
1910.....	28.3	31.2	24.8	26.8
1911.....	29.1	32.0	25.9	27.5
1912.....	30.0	33.0	26.5	28.3
1912.....	30.2	33.2	26.9	28.6
1913.....	31.1	34.0	27.6	29.5

* Figures following the break cover railways with annual operating revenues above $100,000. See page 3.

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TABLE 45.

LOADED FREIGHT CAR-MILES PER FREIGHT TRAIN-MILE.*

(Loaded cars per train.)

Year.	United States.	Eastern District.	Southern District.	Western District.
1903	17.6	19.9	16.5	18.3
1904	17.4	19.3	16.4	18.2
1905	17.8	19.3	16.6	19.1
1906	18.2	19.8	16.8	19.5
1907	18.2	19.8	16.3	19.4
1908	17.9	19.3	14.8	17.6
1909	18.8	20.3	16.0	18.4
1910	19.1	20.9	16.6	18.5
1911	19.4	20.9	17.0	18.9
1912	20.2	21.9	17.5	19.5
1912	20.3	22.0	17.7	19.8
1913	21.1	22.8	18.5	20.5

TABLE 46.

TONS CARRIED ONE MILE.*

Year.	United States.		Eastern District.		Southern District.		Western District.	
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
1903	173,221,278,993	100	87,046,082,562	50.2	20,935,355,077	12.1	65,239,841,354	37.7
1904	174,522,089,577	100	87,009,756,058	49.9	21,737,598,114	12.4	65,774,735,405	37.7
1905	186,463,109,510	100	93,948,925,921	50.4	23,577,646,792	12.6	68,936,536,797	37.0
1906	215,877,551,241	100	107,488,614,742	49.8	27,252,842,492	12.6	81,136,094,007	37.6
1907	236,601,390,103	100	117,961,319,632	49.8	28,815,564,501	12.2	89,824,505,970	38.0
1908	218,381,554,802	100	108,302,123,117	49.6	26,978,599,903	12.3	83,100,831,782	38.1
1909	218,802,986,929	100	106,376,498,931	48.6	28,574,158,775	13.1	83,852,329,223	38.3
1910	255,016,910,451	100	125,024,755,529	49.0	33,840,444,295	13.3	96,151,710,627	37.7
1911	253,783,701,839	100	130,834,171,530	51.6	41,712,302,738	16.4	81,237,227,571	32.0
1912	264,080,745,058	100	134,947,238,083	51.1	44,249,585,878	16.8	84,883,921,097	32.1
1912	263,779,908,254	100	134,856,670,210	51.1	44,172,334,878	16.8	84,750,903,166	32.1
1913	301,398,752,108	100	154,172,856,257	51.2	48,543,394,380	16.1	98,682,501,471	32.7

* Figures following the break cover railways with annual operating revenues above $100,000. See page 8.

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TABLE 47.

TON-MILES PER INHABITANT.*

Year.	United States.	Eastern District.	Southern District.	Western District.
1903	2,144	2,586	1,211	2,186
1904	2,118	2,539	1,240	2,151
1905	2,220	2,693	1,326	2,201
1906	2,522	3,027	1,512	2,531
1907	2,714	3,265	1,577	2,740
1908	2,460	2,947	1,457	2,479
1909	2,421	2,847	1,523	2,448
1910	2,773	3,292	1,781	2,748
1911	2,702	3,124	2,161	2,482
1912	2,764	3,171	2,263	2,539
1912	2,761	3,169	2,259	2,535
1913	3,102	3,566	2,451	2,892

TABLE 48.

AVERAGE HAUL PER TON (MILES).*

Year.	Average haul per ton—United States.	Average haul per ton on the individual railway.			
		United States.	Eastern District.	Southern District.	Western District.
1903	242.35	132.80	113.62	158.24	160.69
1904	244.30	133.23	113.69	159.57	161.07
1905	237.56	130.60	111.22	164.16	156.90
1906	240.89	132.33	110.22	166.77	161.78
1907	242.05	131.71	110.90	164.38	161.15
1908	253.94	143.83	123.43	162.95	169.61
1909	251.10	141.87	123.04	163.79	162.01
1910	249.68	138.31	120.36	164.62	158.79
1911	254.10	142.88	122.68	177.54	171.11
1912	256.87	143.44	121.87	179.40	174.24
1912	261.02	145.15	122.75	183.33	176.87
1913	259.99	146.59	124.11	184.62	179.16

* Figures following the break cover railways with annual operating revenues above $100,000. See page 3.

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TABLE 49.

FREIGHT DENSITY.*

(Ton-miles per mile of line.)

Year.	United States.	Eastern District.	Southern District.	Western District.
1903	855,442	1,581,448	593,641	567,273
1904	829,476	1,552,554	603,169	547,388
1905	861,396	1,660,374	635,430	559,159
1906	982,401	1,868,782	712,660	640,982
1907	1,052,119	2,031,644	737,575	689,285
1908	974,654	1,875,232	673,253	626,382
1909	953,986	1,836,516	692,321	615,629
1910	1,071,086	2,151,593	806,839	682,988
1911	1,053,566	2,073,671	924,069	613,179
1912	1,078,580	2,131,165	952,994	629,131
1912	1,110,811	2,165,738	972,939	638,486
1913	1,245,158	2,473,764	1,063,094	736,959

TABLE 50.

TON-MILES PER FREIGHT TRAIN-MILE.*

(Tons per train.)

Year.	United States.	Eastern District.	Southern District.	Western District.
1903	310.5	388.2	271.7	289.9
1904	307.8	379.9	272.2	290.8
1905	322.3	393.9	281.3	307.6
1906	344.4	418.2	297.7	330.5
1907	357.4	439.2	296.9	339.8
1908	351.8	421.9	275.6	310.7
1909	362.6	434.9	297.5	317.1
1910	380.4	459.8	324.2	325.9
1911	383.1	457.2	337.4	321.7
1912	406.8	484.2	356.4	344.7
1912	410.3	486.8	360.1	348.7
1913	445.4	531.1	386.7	378.6

* Figures following the break cover railways with annual operating revenues above $100,000. See page 8.

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TABLE 51.

TON-MILES PER FREIGHT CAR-MILE—ALL CARS.*

(Tons per car.)

Year.	United States.	Eastern District.	Southern District.	Western District.
1903	12.2	13.3	11.7	11.1
1904	12.2	13.3	11.4	11.2
1905	12.4	13.6	11.5	11.2
1906	13.0	14.2	12.2	11.9
1907	13.8	15.2	12.9	12.6
1908	13.0	14.0	12.2	12.0
1909	12.7	13.8	12.2	11.8
1910	13.4	14.7	13.1	12.2
1911	13.1	14.3	13.0	11.7
1912	13.6	14.7	13.4	12.2
1912	13.6	14.7	13.4	12.2
1913	14.3	15.6	14.0	12.8

TABLE 52.

TON-MILES PER LOADED FREIGHT CAR-MILE.*

(Tons per loaded car.)

Year.	United States.	Eastern District.	Southern District.	Western District.
1903	17.6	19.5	16.5	15.8
1904	17.7	19.6	16.6	16.0
1905	18.1	20.4	17.0	16.1
1906	18.9	21.2	17.7	16.9
1907	19.7	22.2	18.2	17.5
1908	19.6	21.8	18.7	17.6
1909	19.3	21.4	18.6	17.2
1910	19.8	22.1	19.5	17.7
1911	19.7	21.9	19.8	17.8
1912	20.2	22.1	20.3	17.6
1912	20.2	22.1	20.3	17.7
1913	21.1	23.3	20.8	18.5

* Figures following the break cover railways with annual operating revenues above $100,000. See page 3.

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TABLE 53.

TON-MILES PER FREIGHT LOCOMOTIVE.*

Year.	United States.	Eastern District.	Southern District.	Western District.
1903	6,807,942	7,734,679	7,065,594	5,810,977
1904	6,456,846	7,346,315	6,559,324	5,540,791
1905	6,690,700	7,663,045	6,792,753	5,679,398
1906	7,232,563	8,073,959	7,275,185	6,344,209
1907	7,375,585	8,383,889	6,999,166	6,465,916
1908	6,461,907	7,463,450	6,103,756	5,573,870
1909	6,424,796	7,299,060	6,421,159	5,623,522
1910	7,237,569	8,338,875	7,608,014	6,182,992
1911	6,913,259	7,975,324	6,924,884	5,681,495
1912	7,056,034	8,139,354	6,950,754	5,865,487
1912	7,134,323	8,165,176	7,103,001	5,942,488
1913	7,843,663	9,125,898	7,468,059	6,555,542

TABLE 54.

FREIGHT REVENUE PER MILE OF MAIN TRACK.*

Year.	United States.	Eastern District.	Southern District.	Western District.
1903	$6,040	$8,762	$4,668	$4,903
1904	6,000	8,752	4,778	4,824
1905	6,147	9,056	4,881	4,911
1906	6,765	9,930	5,360	5,446
1907	7,312	10,712	5,629	5,969
1908	6,515	9,514	5,053	5,351
1909	6,455	9,305	5,106	5,369
1910	7,239	10,747	5,775	5,885
1911	7,033	10,237	5,997	5,525
1912	7,050	10,448	6,099	5,422
1912	7,254	10,672	6,373	5,566
1913	7,989	11,843	6,777	6,186

* Figures following the break cover railways with annual operating revenues above $100,000. See page 8.

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TABLE 55.

FREIGHT REVENUE PER FREIGHT TRAIN-MILE.*

Year.	United States.	Eastern District.	Southern District.	Western District.
1903	$2.440	$2.645	$2.170	$2.587
1904	2.427	2.656	2.204	2.650
1905	2.497	2.691	2.217	2.803
1906	2.608	2.794	2.303	2.921
1907	2.740	2.943	2.343	3.072
1908	2.653	2.745	2.148	2.771
1909	2.765	2.837	2.272	2.893
1910	2.862	2.969	2.418	2.940
1911	2.895	2.951	2.388	3.083
1912	3.023	3.129	2.489	3.174
1912	3.038	3.143	2.508	3.204
1913	3.243	3.367	2.644	3.396

TABLE 56.

AVERAGE RECEIPTS PER TON-MILE.*

Year.	United States.	Eastern District.	Southern District.	Western District.
	(Cents)	(Cents)	(Cents)	(Cents)
1903	.763	.672	.785	.877
1904	.780	.690	.797	.893
1905	.766	.672	.778	.891
1906	.748	.656	.763	.866
1907	.759	.659	.778	.884
1908	.754	.650	.772	.884
1909	.763	.652	.759	.905
1910	.753	.645	.739	.898
1911	.757	.646	.709	.960
1912	.744	.647	.700	.921
1912	.741	.646	.696	.919
1913	.729	.634	.685	.898

* Figures following the break cover railways with annual operating revenues above $100,000. See page 3.

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VIII. PASSENGER TRAFFIC STATISTICS.

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TABLE 57.

REVENUE PASSENGER TRAIN-MILES.*

Year.	United States.		Eastern District.		Southern District.		Western District.	
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
1903.	425,142,204	100	197,671,171	46.5	53,311,444	12.5	174,159,589	41.0
1904.	440,464,866	100	203,937,486	46.3	55,414,687	12.6	181,112,693	41.1
1905.	459,827,029	100	210,608,951	45.8	58,431,927	12.7	190,786,151	41.5
1906.	479,037,553	100	218,140,275	45.5	60,627,828	12.7	200,269,450	41.8
1907.	509,328,042	100	227,810,264	44.7	66,472,805	13.1	215,044,973	42.2
1908.	505,945,582	100	223,811,526	44.2	66,081,992	13.1	216,052,064	42.7
1909.	506,011,038	100	220,327,128	43.5	65,440,061	12.9	220,243,849	43.6
1910.	549,015,003	100	230,680,427	42.0	70,990,946	12.9	247,343,630	45.1
1911.	572,929,421	100	251,923,180	44.0	86,179,785	15.0	234,826,456	41.0
1912.	585,853,528	100	252,119,052	43.0	91,644,789	15.7	242,089,687	41.3
1912.	582,752,526	100	250,607,791	43.0	90,575,666	15.5	241,569,069	41.5
1913.	593,061,212	100	252,790,510	42.6	93,175,424	15.7	247,095,278	41.7

TABLE 58.

PASSENGER TRAIN DENSITY.*

(Passenger train-miles per mile of line.)

Year.	United States.	Eastern District.	Southern District.	Western District.
1903	2,097	3,618	1,526	1,539
1904	2,110	3,672	1,554	1,540
1905	2,143	3,740	1,598	1,567
1906	2,181	3,824	1,609	1,603
1907	2,265	3,942	1,720	1,674
1908	2,210	3,865	1,670	1,643
1909	2,172	3,809	1,609	1,638
1910	2,306	3,976	1,706	1,786
1911	2,353	4,125	1,935	1,703
1912	2,362	3,929	1,924	1,777
1912	2,446	4,033	2,012	1,843
1913	2,446	4,047	2,035	1,842

* Figures following the break cover railways with annual operating revenues above $100,000. See page 3.

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TABLE 59.

REVENUE PASSENGER CAR-MILES.*

(Covers passenger, sleeping, parlor, and observation cars.)

Year.	United States.		Eastern District.		Southern District.		Western District.	
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
1908.....	1,867,984,570	100.0	797,342,014	42.7	237,174,106	12.7	833,468,450	44.6
1909.....	1,881,022,085	100.0	791,956,916	42.1	228,898,695	12.2	860,166,474	45.7
1910.....	2,048,597,509	100.0	844,731,001	41.2	252,960,278	12.4	950,906,230	46.4
1911.....	2,141,382,030	100.0	918,406,641	42.9	312,767,063	14.6	910,208,326	42.5
1912.....	2,202,843,085	100.0	924,575,686	42.0	334,429,047	15.2	943,838,352	42.8
1912.....	2,191,747,753	100.0	920,973,810	42.0	331,034,526	15.1	939,739,417	42.9
1913.....	2,253,797,814	100.0	948,367,536	42.1	341,354,698	15.1	964,075,580	42.8

TABLE 60.

PASSENGERS CARRIED ONE MILE.*

Year.	United States.		Eastern District.		Southern District.		Western District.	
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
1903.....	20,915,763,881	100	10,680,784,399	51.1	1,982,549,094	9.5	8,252,430,388	39.4
1904.....	21,923,213,536	100	11,025,906,620	50.3	2,116,098,198	9.7	8,781,208,718	40.0
1905.....	23,800,149,436	100	11,532,082,456	48.4	2,375,557,054	10.0	9,892,509,926	41.6
1906.....	25,167,240,831	100	12,290,570,559	48.8	2,433,552,668	9.7	10,443,117,604	41.5
1907.....	27,718,554,030	100	13,355,148,591	48.2	2,799,169,795	10.1	11,564,235,644	41.7
1908.....	29,082,836,944	100	13,543,677,873	46.6	3,004,998,758	10.3	12,534,160,313	43.1
1909.....	29,109,322,589	100	13,249,295,220	45.5	2,907,063,864	10.0	12,952,963,505	44.5
1910.....	32,338,496,329	100	14,399,925,436	44.5	3,222,945,565	10.0	14,715,625,328	45.5
1911.....	33,201,694,699	100	15,511,763,504	46.7	4,174,646,444	12.6	13,515,284,751	40.7
1912.....	33,132,354,783	100	15,745,175,861	47.5	4,335,404,778	13.1	13,051,774,144	39.4
1912.....	33,039,110,808	100	15,710,180,498	47.5	4,315,071,645	13.1	13,013,858,665	39.4
1913.....	34,575,872,980	100	16,397,128,722	47.4	4,489,604,748	13.0	13,689,139,510	39.6

* Figures following the break cover railways with annual operating revenues above $100,000. See page 3.

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TABLE 61.

PASSENGER-MILES PER INHABITANT.*

Year.	United States.	Eastern District.	Southern District.	Western District.
1903	258.9	317.4	114.7	276.5
1904	266.1	321.7	120.7	287.1
1905	283.4	330.5	133.6	315.9
1906	294.1	346.1	135.0	325.8
1907	318.0	369.7	153.2	352.7
1908	327.6	368.6	162.3	373.9
1909	322.1	354.6	155.0	378.2
1910	351.6	379.1	169.6	420.6
1911	353.5	370.3	216.2	412.9
1912	346.8	369.9	221.7	390.4
1912	345.8	369.1	220.7	389.3
1913	355.9	379.3	226.7	401.2

TABLE 62.

AVERAGE JOURNEY PER PASSENGER (MILES).*

Year.	United States.	Eastern District.	Southern District.	Western District.
1903	30.10	23.46	40.28	43.36
1904	30.64	23.78	39.80	44.21
1905	32.21	24.26	41.08	48.10
1906	31.54	23.85	39.20	47.37
1907	31.72	24.19	40.08	45.89
1908	32.86	24.77	39.21	47.00
1909	32.85	24.68	38.20	46.51
1910	33.50	24.60	38.60	48.59
1911	33.48	25.70	35.42	50.00
1912	33.18	25.64	35.60	49.68
1912	33.38	25.56	36.00	50.09
1913	33.58	25.94	36.05	50.17

* Figures following the break cover railways with annual operating revenues above $100,000. See page 8.

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TABLE 63.

AVERAGE NUMBER OF TRIPS PER INHABITANT.*

Year.	United States.	Eastern District.	Southern District.	Western District.
1903	8.60	13.53	2.85	6.38
1904	8.68	13.53	3.03	6.49
1905	8.80	13.62	3.25	6.57
1906	9.32	14.51	3.44	6.88
1907	10.02	15.28	3.82	7.69
1908	10.03	14.88	4.14	7.96
1909	9.86	14.37	4.06	8.13
1910	10.56	15.41	4.39	8.66
1911	10.62	14.54	6.11	8.26
1912	10.51	14.55	6.23	7.86
1912	10.41	14.44	6.13	7.77
1913	10.64	14.72	6.29	8.00

TABLE 64.

PASSENGER DENSITY.*

(Passenger-miles per mile of line.)

Year.	United States.	Eastern District.	Southern District.	Western District.
1903	103,291	194,048	56,217	71,757
1904	104,198	196,740	58,717	73,079
1905	109,949	203,808	64,023	80,240
1906	114,529	213,682	63,637	82,501
1907	123,259	230,015	71,649	88,734
1908	130,073	234,506	74,990	94,478
1909	127,299	228,740	70,435	95,098
1910	138,169	247,813	76,843	103,791
1911	139,191	251,075	92,839	102,555
1912	136,699	257,255	93,645	96,820
1912	140,393	252,299	95,044	98,042
1913	143,067	264,498	98,236	102,227

* Figures following the break cover railways with annual operating revenues above $100,000. See page 8.

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TABLE 65.

PASSENGER-MILES PER PASSENGER TRAIN-MILE.*

(Passengers per train.)

Year.	United States.	Eastern District.	Southern District.	Western District.
1903	46	54	37	47
1904	46	54	38	48
1905	48	55	41	52
1906	49	56	40	52
1907	51	59	42	54
1908	54	59	41	53
1909	54	58	40	53
1910	56	61	41	55
1911	55	60	44	53
1912	53	61	44	49
1912	54	61	44	50
1913	55	64	45	51

TABLE 66.

PASSENGER-MILES PER PASSENGER CAR-MILE.*

(Passengers per car.)

Year.	United States.	Eastern District.	Southern District.	Western District.
1908	15.6	16.9	12.7	15.0
1909	15.5	16.7	12.7	15.1
1910	15.8	17.0	12.7	15.5
1911	15.5	16.9	13.3	14.8
1912	15.0	17.0	13.0	13.8
1912	15.1	17.1	13.0	13.8
1913	15.3	17.3	13.2	14.2

* Figures following the break cover railways with annual operating revenues above $100,000. See page 3.

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TABLE 67.

PASSENGER-MILES PER PASSENGER LOCOMOTIVE.*

Year.	United States.	Eastern District.	Southern District.	Western District.
1903	1,978,786	1,932,125	1,717,980	2,122,539
1904	1,948,384	1,896,767	1,802,469	2,058,900
1905	2,048,558	1,941,101	2,025,198	2,196,383
1906	2,054,636	1,983,310	1,914,676	2,184,296
1907	2,163,146	2,132,048	1,952,001	2,260,406
1908	2,171,106	2,136,227	2,016,778	2,331,937
1909	2,152,907	2,108,082	1,913,801	2,349,531
1910	2,321,744	2,266,991	2,135,815	2,537,614
1911	2,268,097	2,280,275	2,053,487	2,321,320
1912	2,271,544	2,316,977	2,019,054	2,302,259
1912	2,295,902	2,326,218	2,080,458	2,314,798
1913	2,341,629	2,398,559	2,097,650	2,354,250

TABLE 68.

PASSENGER REVENUE PER MILE OF MAIN TRACK.*

Year.	United States.	Eastern District.	Southern District.	Western District.
1903	$1,897	$2,925	$1,320	$1,486
1904	1,927	2,940	1,375	1,524
1905	1,996	2,966	1,471	1,614
1906	2,096	3,132	1,515	1,701
1907	2,256	3,267	1,692	1,876
1908	2,231	3,227	1,645	1,874
1909	2,168	3,107	1,525	1,871
1910	2,365	3,353	1,658	2,070
1911	2,401	3,350	1,826	2,049
1912	2,365	3,369	1,856	1,965
1912	2,437	3,440	1,945	2,022
1913	2,529	3,569	2,011	2,107

* Figures following the break cover railways with annual operating revenues above $100,000. See page 8.

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TABLE 69.

PASSENGER REVENUE PER TRAIN-MILE.*

Year.	United States.	Eastern District.	Southern District.	Western District.
1903	$.992	$1.001	$0.887	$1.013
1904	1.009	1.002	.914	1.045
1905	1.028	.998	.958	1.082
1906	1.065	1.038	.983	1.118
1907	1.109	1.058	1.028	1.187
1908	1.121	1.068	1.036	1.201
1909	1.114	1.052	1.001	1.210
1910	1.147	1.092	1.021	1.234
1911	1.148	1.099	1.054	1.235
1912	1.127	1.117	1.033	1.174
1912	1.128	1.120	1.037	1.171
1913	1.174	1.166	1.063	1.223

TABLE 70.

AVERAGE RECEIPTS PER PASSENGER-MILE.*

Year.	United States.	Eastern District.	Southern District.	Western District.
	(Cents)	(Cents)	(Cents)	(Cents)
1903	2.006	1.851	2.342	2.126
1904	2.006	1.828	2.367	2.142
1905	1.962	1.795	2.319	2.071
1906	2.003	1.814	2.403	2.131
1907	2.014	1.782	2.407	2.188
1908	1.937	1.750	2.261	2.062
1909	1.928	1.742	2.234	2.050
1910	1.938	1.742	2.229	2.067
1911	1.974	1.779	2.160	2.139
1912	1.987	1.782	2.176	2.172
1912	1.985	1.786	2.176	2.174
1913	2.008	1.794	2.198	2.203

* Figures following the break cover railways with annual operating revenues above $100,000. See page 3.

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TABLE 71.

PASSENGER SERVICE TRAIN REVENUE PER TRAIN-MILE.*

Year.	United States.	Eastern District.	Southern District.	Western District.
1903	$1.116	$1.197	$1.095	$1.243
1904	1.141	1.208	1.129	1.284
1905	1.160	1.205	1.178	1.320
1906	1.203	1.257	1.213	1.358
1907	1.258	1.277	1.248	1.446
1908	1.271	1.267	1.135	1.331
1909	1.270	1.256	1.103	1.341
1910	1.304	1.302	1.120	1.368
1911	1.309	1.308	1.162	1.365
1912	1.291	1.331	1.153	1.305
1912	1.302	1.340	1.175	1.318
1913	1.356	1.397	1.205	1.372

TABLE 72.

PASSENGER SERVICE TRAIN REVENUE PER MILE OF MAIN TRACK.*

Year.	United States.	Eastern District.	Southern District.	Western District.
1903	$2,302	$3,497	$1,631	$1,823
1904	2,349	3,545	1,699	1,872
1905	2,425	3,579	1,808	1,969
1906	2,547	3,791	1,869	2,066
1907	2,737	3,944	2,053	2,286
1908	2,717	3,948	1,997	2,275
1909	2,656	3,822	1,880	2,279
1910	2,873	4,112	2,025	2,493
1911	2,920	4,100	2,216	2,479
1912	2,887	4,129	2,257	2,392
1912	2,975	4,216	2,367	2,462
1913	3,088	4,383	2,442	2,565

* Figures following the break cover railways with annual operating revenues above $100,000. See page 3.

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IX. ACCIDENTS.

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BUREAU OF RAILWAY ECONOMICS

Established by Railways of the United States
for the Scientific Study of Transportation Problems

FRANK HAIGH DIXON
CHIEF STATISTICIAN

JULIUS H. PARMELEE
STATISTICIAN

Statistics of Railways 1904-1914 United States

Consecutive No. 81
Miscellaneous Series No. 20
WASHINGTON, D. C.
1915

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BULLETINS OF THE
BUREAU OF RAILWAY ECONOMICS

MONTHLY BULLETINS

Consecutive Number.	Monthly Report Series.	Summary of Revenues and Expenses of Steam Roads in the United States for—
1.	1.	July, 1910.
2.	2.	August, 1910.
3.	3.	September, 1910.
5.	4.	November, 1910 (Preliminary Bulletin).
7.	5.	October, 1910 (Out of Print).
8.	6.	November, 1910.
9.	7.	December, 1910 (Out of Print).
10.	8.	January, 1911.
12.	9.	February, 1911.
13.	10.	March, 1911 (Out of Print).
14.	11.	April, 1911.
16.	12.	May, 1911.
19.	13.	June, 1911 (Out of Print).
20.	14.	July, 1911.
22.	15.	August, 1911 (Out of Print).
25.	16.	September, 1911.
26.	17.	October, 1911.
27.	18.	November, 1911.
29.	19.	December, 1911.
30.	20.	January, 1912.
32.	21.	February, 1912.
33.	22.	March, 1912.
35.	23.	April, 1912.
36.	24.	May, 1912.
37.	25.	June, 1912.
38.	26.	July, 1912.
40.	27.	August, 1912.
41.	28.	September, 1912.
42.	29.	October, 1912.
43.	30.	November, 1912.
44.	31.	December, 1912.
46.	32.	January, 1913.
47.	33.	February, 1913.
48.	34.	March, 1913.
49.	35.	April, 1913.
50.	36.	May, 1913.
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52.	38.	July, 1913.
54.	39.	August, 1913.
55.	40.	September, 1913.
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57.	42.	November, 1913.
58.	43.	December, 1913.
59.	44.	January, 1914.
60.	45.	February, 1914.
61.	46.	March, 1914.
63.	47.	April, 1914.
64.	48.	May, 1914.
65.	49.	June, 1914.
67.	50.	July, 1914.
68.	51.	August, 1914.
69.	52.	September, 1914
70.	53.	October, 1914.
71.	54.	November, 1914.
72.	55.	December, 1914.
74.	56.	January, 1915.
76.	57.	February, 1915.
77.	58.	March, 1915.
78.	59.	April, 1915.
79.	60.	May, 1915.
80.	61.	June, 1915.
82.	62.	July, 1915.

(Continued to page 3 of cover.)

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Statistics of Railways

1904-1914

United States

Bureau of Railway Economics
Washington, D. C.
September, 1915

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INTRODUCTORY NOTE.

The purpose of this bulletin is to present for convenient reference aspects of railway operation in the United States as shown by official statistics. The railway tabulations are based upon official data published by the Interstate Commerce Commission for each fiscal year, ended June 30, from 1904 to 1914, the latest year for which such official data are available. Tabulations concerning population and area are based upon the reports of the Census Bureau.

The entries of the years 1904 to 1907 include, while practically all the entries of the years since 1908 exclude, the returns of switching and terminal companies.

Prior to 1911 the Interstate Commerce Commission presented the statistics of railways by ten territorial groups. Beginning with 1911 it has presented the statistics in three districts representing the three important traffic areas. The map on the following page indicates the ten groups previously used and the three districts that have superseded them.

The statistics given in this bulletin respectively for the three districts for the years prior to 1911 are combinations of the statistics originally published by groups. The boundaries of the present districts coincide exactly with boundaries of the previous groups with one exception, namely: the area between the Illinois-Indiana state line and a line drawn from Chicago through Peoria to St. Louis was formerly included in Group VI, but is now in the Eastern District, which also comprises what were Groups I, II and III. The Western District embraces what were Groups VI, VII, VIII, IX and X, with the exception of that portion of Illinois referred to as now comprised in the Eastern District. Therefore in the tabulations in this bulletin for the years prior to 1911 statistics applying to this portion of Illinois are included in those for the Western District, while in the tabulations for the years 1911 to 1914 statistics for this area are included with those for the Eastern District.

The returns to the Interstate Commerce Commission of small carriers, with annual operating revenues below $100,000, have been so incomplete or so defective in many instances that, beginning with the fiscal year 1913 the Commission has omitted such roads from the majority of its statistical summaries. Accordingly, in the present bulletin there are presented the statistics of all roads wherever practicable, while below the break in each table are given statistics exclusive of roads with revenues below $100,000. Statistics for 1912 are shown on both bases, inclusive and exclusive of small roads.

During the years covered by the tabulations the Interstate Commerce Commission has prescribed certain changes in the accounting system of the railways and in the methods of making statistical reports. These changes do not seriously impair the comparability of the statistics or disturb their general trend.

The statistics of population, area, mileage, capital, number of employees, and equipment relate to June 30 of the several years; all other statistics apply to the fiscal year as a whole.

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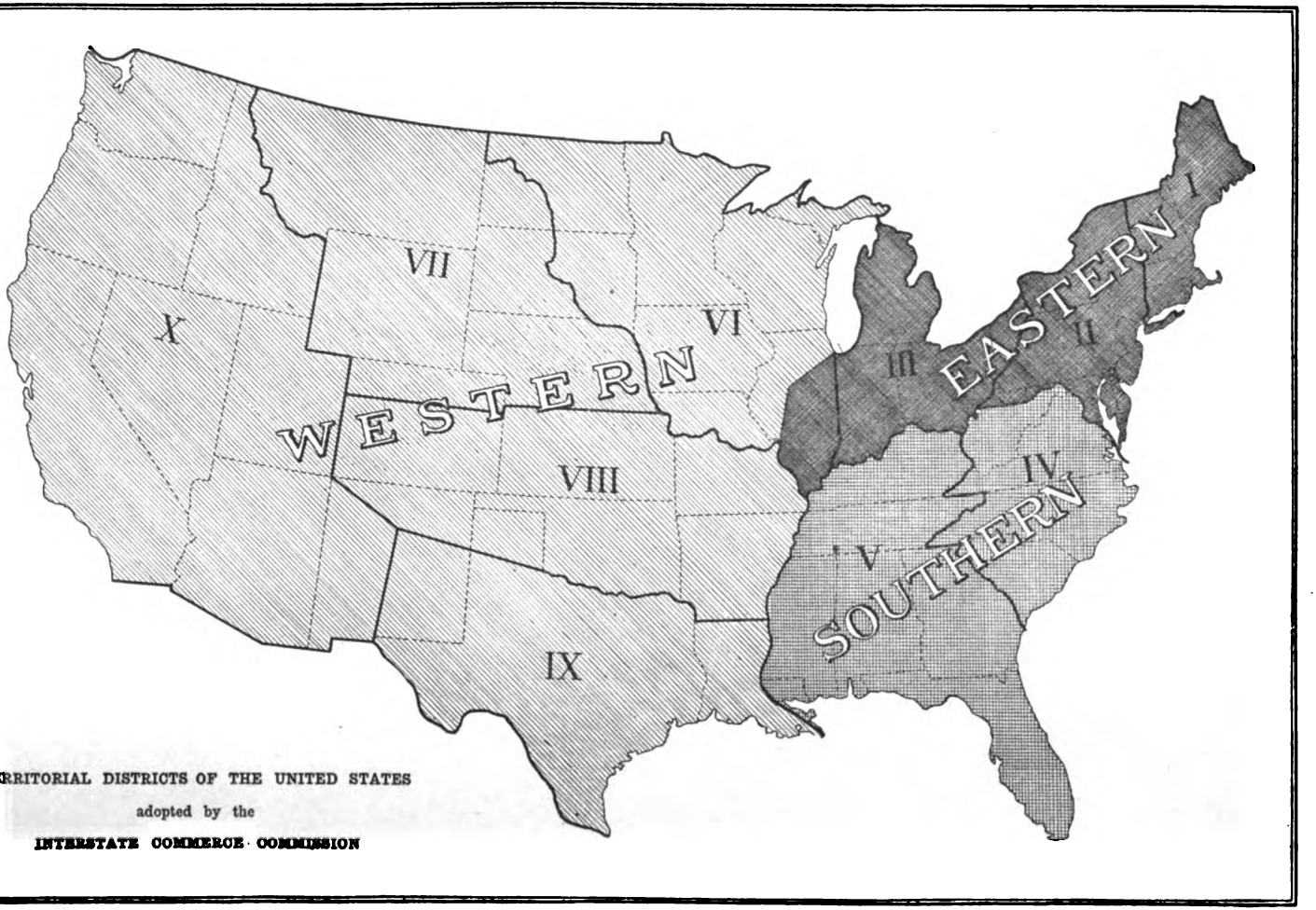

TERRITORIAL DISTRICTS OF THE UNITED STATES
adopted by the
INTERSTATE COMMERCE COMMISSION

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I. POPULATION AND AREA.

TABLE 1. **POPULATION.**

Year.	United States.		Eastern District.		Southern District.		Western District.	
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
1904...	82,385,651	100	34,272,980	41.6	17,528,629	21.3	30,584,042	37.1
1905...	83,983,420	100	34,890,915	41.5	17,774,816	21.2	31,317,689	37.3
1906...	85,581,190	100	35,508,850	41.5	18,021,004	21.1	32,051,336	37.4
1907...	87,178,959	100	36,126,785	41.4	18,267,191	21.0	32,784,983	37.6
1908...	88,776,728	100	36,744,721	41.4	18,513,378	20.8	33,518,629	37.8
1909...	90,374,497	100	37,362,656	41.3	18,759,565	20.8	34,252,276	37.9
1910...	91,972,266	100	37,980,591	41.3	19,005,752	20.7	34,985,923	38.0
1911...	93,927,342	100	41,886,575	44.6	19,306,531	20.6	32,734,236	34.8
1912...	95,545,336	100	42,560,622	44.5	19,555,467	20.5	33,429,247	35.0
1913...	97,163,330	100	43,234,670	44.5	19,804,403	20.4	34,124,257	35.1
1914...	98,781,324	100	43,908,718	44.5	20,053,339	20.3	34,819,267	35.2

TABLE 2. **AREA.**

(Square miles.)

Year.	United States.		Eastern District.		Southern District.		Western District.	
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
1904 to 1910.	2,973,890	100	295,085	9.9	439,341	14.8	2,239,464	75.3
1911 to 1914.	2,973,890	100	328,361	11.0	439,341	14.8	2,206,188	74.2

TABLE 3. **DENSITY OF POPULATION.**

(Number per square mile.)

Year.	United States.	Eastern District.	Southern District.	Western District.
1904.....	27.7	116.1	39.9	13.7
1905.....	28.2	118.2	40.5	14.0
1906.....	28.8	120.3	41.0	14.3
1907.....	29.3	122.4	41.6	14.6
1908.....	29.9	124.5	42.1	15.0
1909.....	30.4	126.6	42.7	15.3
1910.....	30.9	128.7	43.3	15.6
1911.....	31.6	127.6	43.9	14.8
1912.....	32.1	129.6	44.5	15.2
1913.....	32.7	131.7	45.1	15.5
1914.....	32.2	133.7	45.6	15.8

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TABLE 4.

POPULATION PER MILE OF LINE.*

Year.	United States.	Eastern District.	Southern District.	Western District.
1904	388.2	611.5	486.4	254.5
1905	387.1	616.6	479.0	254.0
1906	384.9	617.4	471.2	253.2
1907	383.3	622.2	467.6	251.6
1908	385.2	636.2	462.0	252.7
1909	383.9	645.0	454.5	251.5
1910	381.9	653.6	453.1	248.5
1911	381.4	654.1	409.4	242.4
1912	382.4	662.1	406.3	243.2
1913	383.3	670.2	403.8	243.9
1914	385.0	676.1	403.7	245.3
1912	397.4	683.5	430.7	251.8
1913	397.5	689.8	429.1	251.7
1914	399.3	696.0	428.8	253.2

TABLE 5.

POPULATION PER MILE OF MAIN TRACK.*

Year.	United States.	Eastern District.	Southern District.	Western District.
1904	357.3	493.1	475.9	246.2
1905	354.6	492.3	466.8	244.9
1906	351.7	491.0	458.1	243.4
1907	348.4	489.6	452.2	241.0
1908	349.2	496.1	444.8	242.0
1909	347.6	501.1	436.9	240.4
1910	345.5	505.5	435.0	237.4
1911	343.0	506.8	388.2	231.4
1912	342.2	509.1	383.4	231.2
1913	341.8	512.1	380.0	230.9
1914	341.9	513.6	378.2	231.5
1912	354.2	521.7	405.1	238.9
1913	353.0	523.5	402.3	237.9
1914	353.1	525.0	400.2	238.5

* Figures following the break cover only railways with annual operating revenues above $100,000.
See page 8.

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TABLE 6.

SQUARE MILES OF AREA PER MILE OF LINE.*

Year.	United States.	Eastern District.	Southern District.	Western District.
1904	14.01	5.27	12.19	18.64
1905	13.71	5.22	11.84	18.16
1906	13.38	5.13	11.49	17.69
1907	13.07	5.08	11.25	17.18
1908	12.90	5.11	10.96	16.88
1909	12.63	5.09	10.64	16.44
1910	12.35	5.08	10.47	15.91
1911	12.08	5.13	9.32	16.34
1912	11.90	5.11	9.13	16.05
1913	11.73	5.09	8.96	15.77
1914	11.59	5.06	8.85	15.54
1912	12.37	5.27	9.68	16.62
1913	12.17	5.24	9.52	16.27
1914	12.02	5.20	9.39	16.04

TABLE 7.

MILES OF LINE PER 100 SQUARE MILES OF AREA.*

Year.	United States.	Eastern District.	Southern District.	Western District.
1904	7.14	18.99	8.20	5.37
1905	7.30	19.18	8.45	5.51
1906	7.48	19.49	8.70	5.65
1907	7.65	19.68	8.89	5.82
1908	7.75	19.57	9.12	5.92
1909	7.92	19.63	9.39	6.08
1910	8.10	19.69	9.55	6.29
1911	8.28	19.50	10.73	6.12
1912	8.40	19.58	10.96	6.23
1913	8.52	19.65	11.16	6.34
1914	8.63	19.78	11.31	6.43
1912	8.08	18.96	10.33	6.02
1913	8.22	19.09	10.51	6.15
1914	8.32	19.21	10.64	6.23

* Figures following the break cover only railways with annual operating revenues above $100,000. See page 3.

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II. RAILWAY MILEAGE.

TABLE 8.

MILES OF LINE OPERATED—SINGLE TRACK.*

Year.	United States.		Eastern District.		Southern District.		Western District.	
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
1904...	212,243	100	56,043	26.4	36,039	17.0	120,161	56.6
1905...	216,974	100	56,583	26.1	37,105	17.1	123,286	56.8
1906...	222,340	100	57,518	25.9	38,241	17.2	126,581	56.9
1907...	227,455	100	58,062	25.5	39,068	17.2	130,325	57.3
1908...	230,494	100	57,754	25.1	40,072	17.4	132,668	57.5
1909...	235,402	100	57,923	24.6	41,273	17.5	136,206	57.9
1910...	240,831	100	58,108	24.1	41,942	17.4	140,781	58.5
1911...	246,238	100	64,038	26.0	47,153	19.2	135,047	54.8
1912...	249,852	100	64,284	25.7	48,133	19.3	137,435	55.0
1913...	253,470	100	64,514	25.5	49,040	19.3	139,916	55.2
1914...	256,547	100	64,941	25.3	49,670	19.4	141,936	55.3
1912...	240,406	100	62,268	25.9	45,401	18.9	132,737	55.2
1913...	244,419	100	62,674	25.6	46,158	18.9	135,587	55.5
1914...	247,397	100	63,088	25.5	46,766	18.9	137,543	55.6

TABLE 9.

MILES OF TRACK OPERATED—MAIN TRACK.*

Year.	United States.		Eastern District.		Southern District.		Western District.	
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
1904...	230,581	100	69,499	30.1	36,835	16.0	124,247	53.9
1905...	236,855	100	70,880	29.9	38,080	16.1	127,895	54.0
1906...	243,322	100	72,315	29.7	39,337	16.2	131,670	54.1
1907...	250,226	100	73,783	29.5	40,395	16.1	136,048	54.4
1908...	254,193	100	74,065	29.1	41,621	16.4	138,507	54.5
1909...	259,975	100	74,564	28.7	42,935	16.5	142,476	54.8
1910...	266,185	100	75,129	28.2	43,694	16.4	147,362	55.4
1911...	273,851	100	82,655	30.2	49,733	18.2	141,463	51.6
1912...	279,219	100	83,593	29.9	51,008	18.3	144,618	51.8
1913...	284,297	100	84,421	29.7	52,117	18.3	147,759	52.0
1914...	288,923	100	85,496	29.6	53,020	18.3	150,407	52.1
1912...	269,771	100	81,575	30.2	48,276	17.9	139,920	51.9
1913...	275,242	100	82,580	30.0	49,234	17.9	143,428	52.1
1914...	279,769	100	83,643	29.9	50,113	17.9	146,013	52.2

* Includes a small amount of mileage in Canada; also includes duplications on account of trackage rights and other jointly operated mileage. Figures following the break cover only railways with annual operating revenues above $100,000. See page 3.

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TABLE 10.

MILES OF TRACK OPERATED—YARD TRACK AND SIDINGS.*

Year.	United States.		Eastern District.		Southern District.		Western District.	
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
1904...	66,492	100	28,045	42.2	8,133	12.2	30,314	45.6
1905...	69,942	100	29,439	42.1	8,797	12.6	31,706	45.3
1906...	73,761	100	31,019	42.1	9,293	12.6	33,449	45.3
1907...	77,749	100	32,241	41.5	10,137	13.0	35,371	45.5
1908...	79,453	100	32,619	41.0	10,856	13.7	35,978	45.3
1909...	82,377	100	33,209	40.3	11,247	13.7	37,921	46.0
1910...	85,582	100	34,009	39.7	11,731	13.7	39,842	46.6
1911...	88,974	100	36,894	41.5	13,925	15.6	38,155	42.9
1912...	92,019	100	37,870	41.2	14,585	15.8	39,564	43.0
1913...	95,212	100	38,869	40.8	15,252	16.0	41,091	43.2
1914...	98,285	100	40,059	40.8	15,729	16.0	42,497	43.2
1912...	91,180	100	37,607	41.3	14,421	15.8	39,152	42.9
1913...	94,338	100	38,605	40.9	15,046	16.0	40,687	43.1
1914...	97,334	100	39,795	40.9	15,495	15.9	42,044	43.2

TABLE 11.

MILES OF TRACK OPERATED—ALL TRACKS.*

(Main track plus yard track and sidings.)

Year.	United States.		Eastern District.		Southern District.		Western District.	
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
1904...	297,073	100	97,544	32.8	44,968	15.2	154,561	52.0
1905...	306,797	100	100,319	32.7	46,877	15.3	159,601	52.0
1906...	317,083	100	103,334	32.6	48,630	15.3	165,119	52.1
1907...	327,975	100	106,024	32.3	50,532	15.4	171,419	52.3
1908...	333,646	100	106,684	32.0	52,477	15.7	174,485	52.3
1909...	342,352	100	107,773	31.5	54,182	15.8	180,397	52.7
1910...	351,767	100	109,138	31.0	55,425	15.8	187,204	53.2
1911...	362,825	100	119,549	33.0	63,658	17.5	179,618	49.5
1912...	371,238	100	121,463	32.7	65,593	17.7	184,182	49.6
1913...	379,509	100	123,290	32.5	67,369	17.7	188,850	49.8
1914...	387,208	100	125,555	32.4	68,749	17.8	192,904	49.8
1912...	360,951	100	119,182	33.0	62,697	17.4	179,072	49.6
1913...	369,580	100	121,185	32.8	64,280	17.4	184,115	49.8
1914...	377,103	100	123,438	32.7	65,608	17.4	188,057	49.9

* Includes a small amount of mileage in Canada; also includes duplications on account of trackage rights and other jointly operated mileage. Figures following the break cover only railways with annual operating revenues above $100,000. See page 3.

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III. CAPITAL SECURITIES AND DIVIDENDS.

TABLE 12.

TOTAL CAPITAL SECURITIES.*

Year.	United States.	Eastern District.	Southern District.	Western District.
1904	$13,213,124,679	$5,096,428,336	$1,618,884,950	$6,497,811,393
1905	13,805,258,121	5,356,972,099	1,677,073,671	6,771,212,351
1906	14,570,421,478	5,765,714,732	1,782,643,689	7,022,063,057
1907	16,082,146,683	6,347,229,509	1,995,166,177	7,739,750,997
1908	16,767,544,827	6,442,119,486	2,223,539,298	8,101,886,043
1909	17,487,868,935	6,501,431,103	2,265,101,150	8,721,336,682
1910	18,417,132,238	6,757,051,293	2,307,096,516	9,352,984,429
1911	19,208,935,081	7,261,154,383	2,780,400,185	9,167,380,513
1912	19,752,536,264	7,402,003,816	2,841,606,369	9,508,926,079
1912	19,547,639,509	.....	.....	.....
1913	19,796,125,712	7,420,518,948	2,959,205,219	9,416,401,545
1914	20,247,301,257	7,542,743,727	3,048,919,982	9,655,637,548

TABLE 13.

CAPITAL STOCK.*

Year.	United States.	Eastern District.	Southern District.	Western District.
1904	$6,339,899,329	$2,539,298,624	$667,215,909	$3,133,384,796
1905	6,554,557,051	2,595,937,043	679,760,740	3,278,859,268
1906	6,803,760,093	2,694,844,538	696,487,184	3,412,428,371
1907	7,356,861,691	2,870,527,181	769,294,124	3,717,040,386
1908	7,373,212,323	2,828,679,857	819,117,465	3,725,415,001
1909	7,686,278,545	2,843,385,441	836,104,769	4,006,788,335
1910	8,113,657,380	3,041,886,610	839,877,561	4,231,893,209
1911	8,470,717,611	3,352,507,532	1,049,587,743	4,068,622,336
1912	8,622,400,821	3,404,957,289	1,095,941,097	4,121,502,435
1912	8,493,848,292	.....	.....	.....
1913	8,610,611,327	3,427,713,982	1,165,447,716	4,017,449,629
1914	8,680,759,704	3,446,260,101	1,166,958,332	4,067,541,271

* Figures following the break cover only railways with annual operating revenues above $100,000. See page 3.

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TABLE 14.

FUNDED DEBT.*

Year.	United States.	Eastern District.	Southern District.	Western District.
1904	$6,873,225,350	$2,557,129,712	$951,669,041	$3,364,426,597
1905	7,250,701,070	2,761,035,056	997,312,931	3,492,353,083
1906	7,766,661,385	3,070,870,194	1,086,156,505	3,609,634,686
1907	8,725,284,992	3,476,702,328	1,225,872,053	4,022,710,611
1908	9,394,332,504	3,613,439,629	1,404,421,833	4,376,471,042
1909	9,801,590,390	3,658,045,662	1,428,996,381	4,714,548,347
1910	10,303,474,858	3,715,164,683	1,467,218,955	5,121,091,220
1911	10,738,217,470	3,908,646,851	1,730,812,442	5,098,758,177
1912	11,130,135,443	3,997,046,527	1,745,665,272	5,387,423,644
1912	11,053,791,217	.....	.....	.....
1913	11,185,514,385	3,992,804,966	1,793,757,503	5,398,951,916
1914	11,566,541,553	4,096,483,626	1,881,961,650	5,588,096,277

TABLE 15.

CAPITAL SECURITIES OUTSTANDING IN THE HANDS OF THE PUBLIC—UNITED STATES.*

Year.	Amount.	Per mile of line.
1908	$12,833,591,510	$57,201
1909	13,711,867,783	59,259
1910	14,338,575,940	62,657
1911	15,008,707,570	63,944
1912	15,087,600,650	63,535
1912	.....	.....
1913	15,330,131,446	65,861
1914	15,719,696,925	66,661

* Figures following the break cover only railways with annual operating revenues above $100,000. See page 3.

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TABLE 16.

DIVIDENDS ON STOCK—UNITED STATES.*

Year.	Amount of stock paying dividends.	Amount of dividends paid.	Per cent of stock paying dividends.	Average rate on dividend-paying stock. (Per cent.)	Average rate on all stock. (Per cent.)
1904.....	$3,643,427,319	$221,941,049	57.47	6.09	3.50
1905.....	4,119,086,714	237,964,482	62.84	5.78	3.63
1906.....	4,526,958,760	272,795,974	66.54	6.03	4.01
1907.....	4,948,756,203	308,088,627	67.27	6.23	4.19
1908.....	4,843,370,740	390,695,351	65.69	8.07	5.30
1909.....	4,920,174,118	321,071,626	64.01	6.53	4.18
1910.....	5,412,578,457	405,771,416	66.71	7.50	5.00
1911.....	5,730,250,326	460,195,376	67.65	8.03	5.43
1912.....	5,581,289,249	400,315,313	64.73	7.17	4.64
1913.....	5,780,982,416	369,077,546	66.14	6.37	4.22
1914.....	5,667,072,956	451,653,346	64.39	7.97	5.13
1913.....	5,774,587,583	368,606,327	67.06	6.38	4.28
1914.....	5,661,738,723	451,263,197	65.22	7.97	5.20

* Figures following the break cover only railways with annual operating revenues above $100,000.
See page 8.

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TABLE 17.

TOTAL OPERATING REVENUES.*

Year.	United States.		Eastern District.		Southern District.		Western District.	
	Amount.	Per cent.	Amount.	Per cent.	Amount.	Per cent.	Amount.	Per cent.
1904	$1,975,174,091	100	$873,678,276	44.2	$244,527,877	12.4	$856,967,938	43.4
1905	2,082,482,406	100	915,240,636	44.0	260,964,909	12.5	906,276,861	43.5
1906	2,325,765,167	100	1,013,949,012	43.6	292,146,076	12.6	1,019,670,079	43.8
1907	2,589,105,578	100	1,107,437,169	42.8	319,545,986	12.3	1,162,122,423	44.9
1908	2,394,780,410	100	1,015,910,479	42.4	299,365,914	12.5	1,079,504,017	45.1
1909	2,419,299,638	100	998,652,453	41.3	306,404,782	12.7	1,114,242,403	46.0
1910	2,752,634,153	100	1,140,618,432	41.4	348,483,869	12.7	1,263,531,852	45.9
1911	2,789,761,669	100	1,212,471,633	43.5	421,305,872	15.1	1,155,984,164	41.4
1912	2,842,695,382	100	1,248,099,590	43.9	439,059,786	15.4	1,155,536,006	40.7
1912	2,826,958,366	100	1,243,937,196	44.0	434,587,888	15.4	1,148,433,282	40.6
1913	3,125,135,798	100	1,374,687,703	44.0	468,058,302	15.0	1,282,389,793	41.0
1914	3,047,019,908	100	1,325,702,824	43.5	479,955,049	15.8	1,241,362,035	40.7

TABLE 18.

TOTAL OPERATING REVENUES PER MILE OF LINE.*

Year.	United States.	Eastern District.	Southern District.	Western District.
1904	$9,306	$15,730	$6,859	$7,288
1905	9,598	16,253	7,136	7,445
1906	10,460	17,773	7,755	8,162
1907	11,383	19,163	8,267	9,047
1908	10,491	17,544	7,565	8,209
1909	10,356	17,266	7,533	8,288
1910	11,553	19,660	8,376	9,123
1911	11,433	19,025	9,005	8,657
1912	11,482	19,519	9,241	8,494
1912	11,849	20,069	9,679	8,730
1913	12,859	22,025	10,149	9,541
1914	12,387	21,093	10,289	9,101

* Figures following the break cover only railways with annual operating revenues above $100,000. See page 8. No adjustments made to include returns of outside operations.

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TABLE 19. **TOTAL OPERATING EXPENSES.***

Year.	United States.		Eastern District.		Southern District.		Western District.	
	Amount.	Per cent.	Amount.	Per cent.	Amount.	Per cent.	Amount.	Per cent.
1904	$1,338,896,253	100	$615,980,209	46.0	$167,112,419	12.5	$555,803,625	41.5
1905	1,390,602,152	100	635,054,801	45.7	177,907,098	12.8	577,640,253	41.5
1906	1,536,877,271	100	691,445,885	45.0	203,349,785	13.2	642,081,601	41.8
1907	1,748,515,814	100	769,661,507	44.0	237,065,888	13.6	741,788,419	42.4
1908	1,670,396,803	100	720,605,479	43.1	221,552,450	13.3	728,238,874	43.6
1909	1,599,903,524	100	675,383,097	42.2	207,714,327	13.0	716,806,100	44.8
1910	1,824,201,156	100	761,423,244	41.7	231,222,204	12.7	831,555,708	45.6
1911	1,915,054,005	100	854,017,274	44.6	288,575,801	15.1	772,460,930	40.3
1912	1,972,415,776	100	878,803,260	44.6	312,212,958	15.8	781,399,558	39.6
1912	1,959,094,658	100	875,139,307	44.7	308,744,096	15.7	775,211,255	39.6
1913	2,169,968,924	100	981,564,859	45.2	336,371,392	15.5	852,032,673	39.3
1914	2,200,313,159	100	1,004,620,282	45.7	348,295,136	15.8	847,397,741	38.5

TABLE 20. **TOTAL OPERATING EXPENSES PER MILE OF LINE.***

Year.	United States.	Eastern District.	Southern District.	Western District.
1904	$6,308	$11,090	$4,687	$4,727
1905	6,409	11,277	4,865	4,745
1906	6,912	12,120	5,398	5,139
1907	7,687	13,318	6,133	5,775
1908	7,320	12,444	5,599	5,538
1909	6,851	11,677	5,107	5,332
1910	7,658	13,124	5,558	6,004
1911	7,850	13,401	6,168	5,788
1912	7,968	13,742	6,571	5,746
1912	8,212	14,119	6,876	5,893
1913	8,929	15,724	7,293	6,841
1914	8,944	15,081	7,466	6,213

* Figures following the break cover only railways with annual operating revenues above $100,000. See page 8. No adjustments made to include returns of outside operations.

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TABLE 21.

NET OPERATING REVENUE.*

Year.	United States.		Eastern District.		Southern District.		Western District.	
	Amount.	Per cent.	Amount.	Per cent.	Amount.	Per cent.	Amount.	Per cent.
1904.	$636,277,838	100	$257,698,067	40.5	$77,415,458	12.2	$301,164,313	47.3
1905.	691,880,254	100	280,185,835	40.5	83,057,811	12.0	328,636,608	47.5
1906.	788,887,896	100	322,503,127	40.9	88,796,291	11.2	377,588,478	47.9
1907.	840,589,764	100	337,775,662	40.2	82,480,098	9.8	420,334,004	50.0
1908.	724,383,607	100	295,305,000	40.8	77,813,464	10.7	351,265,143	48.5
1909.	819,396,114	100	323,269,356	39.5	98,690,455	12.0	397,436,303	48.5
1910.	928,432,997	100	379,195,188	40.9	117,261,665	12.6	431,976,144	46.5
1911.	874,707,664	100	358,454,359	41.0	132,730,071	15.2	383,523,234	43.8
1912.	870,279,606	100	369,296,330	42.4	126,846,828	14.6	374,136,448	43.0
1912.	867,863,708	100	368,797,889	42.5	125,843,792	14.5	373,222,027	43.0
1913.	955,166,874	100	393,122,844	41.2	131,686,910	13.8	430,357,120	45.0
1914.	846,706,749	100	321,082,542	37.9	131,659,913	15.6	393,964,294	46.5

TABLE 22.

NET OPERATING REVENUE PER MILE OF LINE.*

Year.	United States.	Eastern District.	Southern District.	Western District.
1904	$2,998	$4,640	$2,172	$2,561
1905	3,189	4,976	2,271	2,700
1906	3,548	5,653	2,357	3,023
1907	3,696	5,845	2,134	3,272
1908	3,171	5,100	1,966	2,671
1909	3,505	5,589	2,426	2,956
1910	3,895	6,536	2,818	3,119
1911	3,583	5,624	2,837	2,869
1912	3,514	5,777	2,670	2,748
1912	3,637	5,950	2,803	2,837
1913	3,930	6,301	2,856	3,201
1914	3,443	5,112	2,823	2,887

* Figures following the break cover only railways with annual operating revenues above $100,000. See page 8. No adjustments made to include returns of outside operations.

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TABLE 23. **TAXES.***

Year.	United States.		Eastern District.		Southern District.		Western District.	
	Amount.	Per cent.	Amount.	Per cent.	Amount.	Per cent.	Amount.	Per cent.
1904	$61,696,354	100	$27,281,261	44.2	$7,408,685	12.0	$27,006,408	43.8
1905	63,474,679	100	26,822,250	42.2	7,603,059	12.0	29,049,370	45.8
1906	74,785,615	100	33,966,223	45.4	8,134,906	10.9	32,684,486	43.7
1907	80,312,375	100	34,997,708	43.6	9,115,747	11.3	36,198,920	45.1
1908	84,599,992	100	35,075,252	41.5	10,236,454	12.1	39,288,286	46.4
1909	90,558,316	100	38,003,994	42.0	10,673,226	11.8	41,881,096	46.2
1910	103,853,576	100	41,882,451	40.3	11,679,163	11.3	50,291,962	48.4
1911	108,309,512	100	46,350,019	42.8	15,461,908	14.3	46,497,585	42.9
1912	120,091,534	100	51,455,928	42.8	16,190,923	13.5	52,444,683	43.7
1912	.....	...	.....	....	.....	....	.....	....
1913	127,331,960	100	54,171,368	42.5	17,203,278	13.5	55,957,314	44.0
1914	140,531,575	100	57,204,554	40.7	19,656,547	14.0	63,670,474	45.3

TABLE 24. **TAXES PER MILE OF LINE.***

Year.	United States.	Eastern District.	Southern District.	Western District.
1904	$296	$491	$208	$230
1905	296	476	208	239
1906	340	595	216	262
1907	357	606	236	282
1908	369	606	259	299
1909	389	657	262	312
1910	436	722	281	363
1911	445	759	347	337
1912	484	802	340	385
1912	...	...	...	...
1913	525	869	374	417
1914	572	911	422	467

* Figures following the break cover only railways with annual operating revenues above $100,000. See page 8. Per-mile averages computed by Bureau of Railway Economics on basis of income returns of operating and non-operating roads.

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TABLE 25.

OPERATING REVENUES IN DETAIL.

*Freight Revenue.**

Year.	United States.	Eastern District.	Southern District.	Western District.
1904	$1,379,002,693	$605,269,371	$175,638,490	$598,094,832
1905	1,450,772,838	638,488,379	185,516,649	626,767,810
1906	1,640,386,655	714,405,951	210,494,544	715,486,160
1907	1,823,651,998	786,454,587	226,908,823	810,288,588
1908	1,656,062,597	704,628,266	210,299,166	741,135,165
1909	1,678,058,645	693,832,426	219,235,117	764,991,102
1910	1,926,940,028	807,378,037	252,352,819	867,209,172
1911	1,925,950,887	846,102,280	298,233,804	781,614,803
1912	1,968,598,630	873,338,982	311,122,036	784,137,612
1912	1,956,942,262	870,561,748	307,637,291	778,743,223
1913	2,198,930,565	977,996,783	333,683,307	887,250,475
1914	2,114,697,629	923,291,025	341,467,842	849,938,762

*Passenger Revenue.**

1904	$444,326,991	$204,348,395	$50,636,471	$189,342,125
1905	472,694,732	210,219,614	55,996,810	206,478,308
1906	510,032,583	226,471,058	59,601,298	223,960,227
1907	564,606,343	241,020,076	68,343,456	255,242,811
1908	567,071,551	239,019,768	68,466,194	259,585,589
1909	563,746,612	231,691,496	65,491,959	266,563,157
1910	629,452,643	251,888,951	72,459,675	305,104,017
1911	657,638,291	276,892,713	90,820,258	289,925,320
1912	660,373,176	281,602,503	94,660,991	284,109,682
1912	657,362,319	280,584,639	93,887,737	282,889,943
1913	695,987,817	294,695,596	99,034,688	302,257,533
1914	700,403,353	299,097,976	102,543,523	298,761,854

*Mail Revenue.**

1904	$44,499,732	$16,894,898	$5,670,773	$21,934,061
1905	45,426,125	16,938,488	6,233,660	22,253,977
1906	47,371,453	18,579,757	6,394,819	22,396,877
1907	50,378,964	18,543,577	6,254,146	25,581,241
1908	48,537,768	17,496,906	6,024,777	25,016,085
1909	49,391,681	17,539,833	6,152,346	25,699,502
1910	48,946,052	17,041,450	6,143,317	25,761,285
1911	50,702,625	18,403,859	6,985,944	25,312,822
1912	50,935,856	18,442,687	6,940,402	25,552,767
1912	50,675,660	18,380,821	6,865,885	25,428,954
1913	50,789,212	18,201,129	7,265,057	25,323,026
1914	55,062,961	20,892,247	7,683,400	26,487,314

* Figures following the break cover only railways with annual operating revenues above $100,000.
See page 8.

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TABLE 25—Continued.

*Express Revenue.**

Year.	United States.	Eastern District.	Southern District.	Western District.
1904	$41,875,636	$20,050,421	$5,457,546	$16,367,669
1905	45,149,155	21,829,801	5,717,101	17,602,253
1906	51,010,930	24,439,278	6,607,694	19,963,958
1907	57,332,931	26,418,747	7,286,018	23,628,166
1908	58,714,502	27,412,120	7,388,966	23,913,416
1909	59,663,774	26,550,848	7,748,113	25,364,813
1910	67,213,583	29,869,378	8,488,213	28,855,992
1911	70,725,137	32,154,998	10,565,819	28,004,320
1912	73,203,730	32,905,994	11,565,112	28,732,624
1912	72,983,618	32,816,700	11,522,925	28,643,993
1913	79,717,266	36,133,752	11,827,666	31,755,848
1914	75,541,569	34,045,828	11,756,855	29,738,886

*Passenger Service Train-Revenue.**

(Passenger, excess baggage, parlor and chair car, mail, express, milk and other passenger train-revenue.)

1904	$541,617,105	$246,407,833	$62,581,282	$232,627,990
1905	574,310,154	253,689,270	68,850,861	251,770,023
1906	619,729,203	274,131,533	73,536,581	272,061,089
1907	684,993,137	291,027,152	82,932,119	311,033,866
1908	690,666,227	292,398,155	83,108,013	315,160,059
1909	690,493,165	285,019,287	80,705,983	324,767,895
1910	764,773,354	308,913,379	88,461,397	367,398,578
1911	799,771,186	338,882,833	110,215,315	350,673,038
1912	806,238,267	345,172,512	115,147,163	345,918,592
1912	802,651,216	343,929,617	114,250,628	344,470,971
1913	849,985,506	361,911,685	120,220,646	367,853,175
1914	855,046,516	367,302,256	124,127,798	363,616,462

* Figures following the break cover only railways with annual operating revenues above $100,000. See page 3.

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TABLE 26.

OPERATING EXPENSES IN DETAIL.

*Maintenance of Way and Structures.**

Year.	United States.	Eastern District.	Southern District.	Western District.
1904	$261,280,454	$110,068,086	$35,133,095	$116,079,273
1905	275,046,036	114,633,121	37,972,711	122,440,204
1906	311,720,820	126,778,495	43,574,284	141,368,041
1907	343,544,907	137,967,918	48,586,723	156,990,266
1908	329,578,071	128,779,292	42,902,528	157,896,251
1909	308,570,767	116,871,021	40,367,112	151,332,634
1910	368,944,774	139,013,044	47,021,069	182,910,661
1911	366,025,262	150,749,921	57,067,778	158,207,563
1912	367,448,229	150,838,598	59,450,331	157,159,300
1912	363,519,782	149,738,693	58,450,251	155,330,838
1913	421,232,395	179,853,493	66,307,588	175,071,314
1914	419,277,779	178,846,529	64,823,705	175,607,545

*Maintenance of Equipment.**

1904	$267,184,739	$128,636,799	$36,016,086	$102,531,854
1905	288,441,273	137,492,560	39,060,800	111,887,913
1906	328,554,658	155,025,490	45,166,675	128,362,493
1907	368,061,728	170,222,639	52,853,847	144,985,242
1908	368,448,241	165,894,126	53,488,732	149,065,383
1909	363,972,764	161,806,588	50,797,326	151,368,850
1910	413,346,364	183,616,460	58,426,484	171,303,420
1911	428,367,306	198,297,688	71,365,189	158,704,429
1912	450,372,546	211,360,009	78,293,968	160,718,569
1912	448,345,261	210,827,637	77,753,060	159,764,564
1913	511,561,363	242,678,866	84,265,002	184,617,495
1914	532,138,606	254,063,933	90,522,093	187,552,580

*Traffic and Transportation.**

1904	$758,238,681	$356,361,090	$88,438,306	$313,439,285
1905	771,228,666	360,927,118	92,631,806	317,669,742
1906	836,202,707	386,009,514	105,669,134	344,524,059
1907	970,952,924	436,094,876	125,928,571	408,929,477
1908	916,900,138	404,722,835	116,730,750	395,446,553
1909	863,588,165	372,292,586	107,036,813	384,258,766
1910	973,186,887	412,380,307	115,487,117	445,319,463
1911	1,046,548,472	474,588,362	148,057,209	423,902,901
1912	1,079,837,688	486,032,149	161,784,283	432,021,256
1912	1,073,984,677	484,353,153	160,372,953	429,258,571
1913	1,159,102,858	526,694,820	172,877,195	459,530,843
1914	1,165,367,109	536,741,382	178,938,331	449,687,396

* Figures following the break cover only railways with annual operating revenues above $100,000. See page 3.

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TABLE 26—Continued.

*General.**

Year.	United States.	Eastern District.	Southern District.	Western District.
1904	$51,579,196	$20,876,096	$7,237,944	$23,465,156
1905	55,319,805	21,957,055	7,862,270	25,500,480
1906	59,752,230	23,506,148	8,665,342	27,580,740
1907	65,404,655	25,159,180	9,568,613	30,676,862
1908	55,287,963	21,158,791	8,407,844	25,721,328
1909	63,729,941	24,395,790	9,513,076	29,821,075
1910	68,694,684	26,413,433	10,287,534	31,993,717
1911	73,689,373	30,357,531	11,875,776	31,456,066
1912	74,517,548	30,497,637	12,549,051	31,470,860
1912	73,244,938	30,219,824	12,167,832	30,857,282
1913	78,072,308	32,337,680	12,921,607	32,813,021
1914	83,529,665	34,968,438	14,011,007	34,550,220

TABLE 27.

OPERATING RATIO.*

(Ratio of operating expenses to operating revenues.)

Year.	United States.	Eastern District.	Southern District.	Western District.
	(per cent.)	(per cent.)	(per cent.)	(per cent.)
1904	67.7	70.5	68.3	64.8
1905	66.7	69.3	68.1	63.7
1906	66.0	68.1	69.6	62.9
1907	67.5	69.4	74.1	63.8
1908	69.7	70.9	74.0	67.4
1909	66.1	67.6	67.7	64.3
1910	66.2	66.7	66.3	65.8
1911	68.6	70.4	68.5	66.8
1912	69.3	70.4	71.1	67.6
1912	69.3	70.4	71.0	67.5
1913	69.4	71.4	71.9	66.4
1914	72.2	75.8	72.6	68.3

* Figures following the break cover only railways with annual operating revenues above $100,000. See page 8.

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V. EMPLOYEES AND COMPENSATION.

TABLE 28. **NUMBER OF EMPLOYEES.**

*Number of All Employees.**

Year.	United States.		Eastern District.		Southern District.		Western District.	
	Number.	Per 100 miles of line.	Number.	Per 100 miles of line.	Number.	Per 100 miles of line.	Number.	Per 100 miles of line.
1904.....	1,296,121	611	586,674	1,047	175,153	486	534,294	445
1905.....	1,382,196	637	620,825	1,097	186,983	504	574,388	446
1906.....	1,521,355	684	674,726	1,173	210,834	551	635,795	502
1907.....	1,672,074	735	731,453	1,260	232,513	595	708,108	544
1908.....	1,436,275	623	635,695	1,101	206,149	514	594,431	448
1909.....	1,502,823	638	648,391	1,119	197,647	479	656,785	482
1910.....	1,699,420	706	726,431	1,250	223,257	532	749,732	533
1911.....	1,669,809	678	729,636	1,141	276,495	586	663,678	491
1912.....	1,716,380	687	759,638	1,182	296,211	615	660,531	481
1912.....	1,699,941	707	755,183	1,213	291,257	641	653,501	492
1913.....	1,815,239	743	823,556	1,314	299,068	648	692,615	511
1914.....	1,695,483	685	737,999	1,170	293,850	629	663,634	483

*Number of General and Other Officers.**

1904.....	10,540	5	4,392	8	2,108	6	4,040	3
1905.....	11,242	5	4,650	8	2,196	6	4,396	4
1906.....	12,795	6	5,430	9	2,433	6	4,932	4
1907.....	13,956	6	5,929	10	2,772	7	5,255	4
1908.....	12,827	5	4,846	8	2,790	7	5,191	4
1909.....	13,514	5	4,912	8	2,762	7	5,840	4
1910.....	14,868	6	5,229	9	2,813	7	6,826	5
1911.....	15,824	6	5,896	9	3,347	7	6,581	5
1912.....	16,204	6	5,938	9	3,756	7	6,510	5
1912.....	14,372	6	5,426	9	3,233	7	5,713	4
1913.....	15,104	6	5,733	9	3,448	8	5,923	5
1914.....	15,215	6	5,660	9	3,537	8	6,018	5

*Number of General Office Clerks.**

1904.....	46,037	22	19,803	35	7,115	20	19,119	16
1905.....	51,284	24	23,106	41	7,308	20	20,870	17
1906.....	57,210	26	26,025	45	8,053	21	23,132	18
1907.....	65,700	29	29,308	50	9,099	23	27,293	21
1908.....	63,973	28	28,441	49	9,476	24	26,056	20
1909.....	69,959	30	29,543	51	9,320	23	31,096	23
1910.....	76,329	32	32,141	55	10,638	25	33,550	24
1911.....	76,513	31	35,259	55	10,641	23	30,613	23
1912.....	78,818	32	36,305	56	11,647	24	30,866	22
1912.....	78,306	33	36,175	58	11,517	25	30,614	23
1913.....	84,267	34	39,739	63	11,707	25	32,821	24
1914.....	86,528	35	40,561	64	12,237	26	33,730	25

* Figures following the break cover only railways with annual operating revenues above $100,000.
See page 8.

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TABLE 28—Continued.

*Number of Station Agents.**

Year.	United States.		Eastern District.		Southern District.		Western District.	
	Number.	Per 100 miles of line.	Number.	Per 100 miles of line.	Number.	Per 100 miles of line.	Number.	Per 100 miles of line.
1904.....	34,918	16	14,507	26	5,816	16	14,595	12
1905.....	35,245	16	14,631	26	5,906	16	14,708	12
1906.....	34,940	16	14,009	24	6,379	17	14,552	11
1907.....	35,649	16	14,353	25	6,341	16	14,955	11
1908.....	35,740	16	14,202	25	6,385	16	15,153	11
1909.....	36,519	15	14,161	25	6,511	16	15,847	12
1910.....	37,379	16	14,261	25	6,758	16	16,360	12
1911.....	38,277	16	15,133	24	7,835	17	15,309	11
1912.....	38,428	15	15,274	24	7,949	17	15,205	11
1912.....	37,395	16	14,927	24	7,598	17	14,870	11
1913.....	37,721	16	14,474	23	7,934	17	15,313	11
1914.....	38,063	15	14,482	23	8,021	17	15,560	11

*Number of Other Station Men.**

1904.....	120,002	57	63,712	114	16,871	47	39,419	33
1905.....	125,180	58	64,630	114	18,234	49	42,316	34
1906.....	138,778	62	70,885	123	19,932	52	47,961	38
1907.....	152,929	67	78,963	136	21,686	56	52,280	40
1908.....	132,013	57	68,481	119	18,794	47	44,738	34
1909.....	136,733	58	71,738	124	18,316	44	46,679	34
1910.....	153,104	64	78,944	136	20,396	49	53,764	38
1911.....	153,117	62	79,960	125	26,223	55	46,934	35
1912.....	161,730	65	83,576	130	28,130	59	50,024	36
1912.....	161,206	67	83,393	134	27,979	62	49,834	38
1913.....	167,450	69	88,085	141	27,614	60	51,751	38
1914.....	163,100	66	83,619	133	28,290	60	51,191	37

*Number of Enginemen.**

1904.....	52,451	25	25,607	46	6,776	19	20,068	17
1905.....	54,817	25	26,362	47	7,160	19	21,295	17
1906.....	59,855	27	28,435	49	7,812	20	23,608	19
1907.....	65,298	29	30,511	53	8,528	22	26,259	20
1908.....	57,668	25	26,754	46	7,878	20	23,036	17
1909.....	57,077	24	26,013	45	7,596	18	23,468	17
1910.....	64,691	27	29,084	50	8,145	19	27,462	20
1911.....	63,390	26	29,857	47	9,901	21	23,632	18
1912.....	64,382	26	30,760	48	10,806	22	22,816	17
1912.....	63,672	26	30,558	49	10,589	23	22,525	17
1913.....	67,026	27	32,828	52	10,445	23	23,753	18
1914.....	61,365	25	29,597	47	10,157	22	21,611	16

* Figures following the break cover only railways with annual operating revenues above $100,000. See page 8.

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TABLE 28—Continued.

*Number of Firemen.**

Year.	United States.		Eastern District.		Southern District.		Western District.	
	Number.	Per 100 miles of line.	Number.	Per 100 miles of line.	Number.	Per 100 miles of line.	Number.	Per 100 miles of line.
1904.....	55,004	26	26,773	48	7,404	21	20,827	17
1905.....	57,892	27	27,430	48	8,038	22	22,424	18
1906.....	62,678	28	29,061	51	8,625	23	24,992	20
1907.....	69,384	31	32,013	55	9,395	24	27,976	21
1908.....	61,215	27	28,247	49	8,258	21	24,710	19
1909.....	60,349	26	28,145	49	7,893	19	24,311	18
1910.....	68,321	28	30,314	52	8,582	20	29,425	21
1911.....	66,376	27	30,994	49	10,731	23	24,651	18
1912.....	67,195	27	31,892	50	11,793	25	23,510	17
1912.....	66,487	28	31,690	51	11,575	25	23,222	17
1913.....	70,477	29	34,317	55	11,739	25	24,421	18
1914.....	64,335	26	31,073	49	10,701	23	22,561	16

*Number of Conductors.**

1904.....	39,645	19	19,860	35	4,799	13	14,986	12
1905.....	41,061	19	20,311	36	5,164	14	15,586	13
1906.....	43,936	20	21,587	38	5,855	15	16,494	13
1907.....	48,869	22	23,440	40	6,752	17	18,677	14
1908.....	43,322	19	20,883	36	5,813	15	16,626	13
1909.....	43,608	18	20,920	36	5,979	14	16,709	12
1910.....	48,682	20	23,059	40	6,397	15	19,226	14
1911.....	48,200	20	23,309	36	8,079	17	16,812	12
1912.....	49,685	20	24,142	38	8,637	18	16,906	12
1912.....	49,062	20	23,938	38	8,466	19	16,658	13
1913.....	52,086	21	25,690	41	8,766	19	17,630	13
1914.....	47,621	19	22,995	36	8,760	19	15,866	12

*Number of Other Trainmen.**

1904.....	106,734	50	55,636	99	13,136	36	37,962	32
1905.....	111,405	51	56,960	101	14,145	38	40,300	33
1906.....	119,087	53	60,301	105	16,185	42	42,601	34
1907.....	134,257	59	65,667	113	18,630	48	49,960	38
1908.....	114,580	50	56,499	98	15,721	39	42,360	32
1909.....	114,760	49	55,254	95	14,757	36	44,749	33
1910.....	136,938	57	62,398	107	16,642	40	57,898	41
1911.....	133,221	54	62,857	98	19,964	42	50,400	37
1912.....	137,067	55	66,346	103	21,766	45	48,955	36
1912.....	136,008	57	65,999	106	21,432	47	48,577	37
1913.....	146,855	60	72,743	116	23,067	50	51,045	38
1914.....	135,853	55	66,113	105	21,797	47	47,943	35

* Figures following the break cover only railways with annual operating revenues above $100,000. See page 8.

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TABLE 28—Continued.

*Number of Machinists.**

Year.	United States.		Eastern District.		Southern District.		Western District.	
	Number.	Per 100 miles of line.	Number.	Per 100 miles of line.	Number.	Per 100 miles of line.	Number.	Per 100 miles of line.
1904.....	46,272	22	24,088	43	5,064	14	17,120	14
1905.....	47,018	22	24,422	43	5,232	14	17,364	14
1906.....	51,253	23	27,327	48	5,936	16	17,990	14
1907.....	55,244	24	29,644	51	6,233	16	19,367	15
1908.....	44,941	19	24,749	43	5,298	13	14,894	11
1909.....	48,237	20	25,154	43	5,382	13	17,701	13
1910.....	55,193	23	28,323	49	6,510	16	20,360	14
1911.....	55,207	22	30,701	48	7,788	17	16,718	12
1912.....	57,507	23	32,494	51	8,606	18	16,407	12
1912.....	57,266	24	32,430	52	8,517	19	16,319	12
1913.....	60,726	25	34,758	55	7,600	16	18,368	14
1914.....	56,235	23	32,072	51	7,397	16	16,766	12

*Number of Carpenters.**

1904.....	53,646	25	23,444	42	8,851	25	21,351	18
1905.....	56,089	26	24,595	43	9,614	26	21,880	18
1906.....	63,830	29	28,727	50	10,654	28	24,449	19
1907.....	70,394	31	31,410	54	10,745	28	28,239	22
1908.....	58,946	25	25,153	44	9,929	25	23,864	18
1909.....	60,867	26	26,789	46	9,120	22	24,958	18
1910.....	68,085	28	29,464	51	10,417	25	28,204	20
1911.....	65,989	27	29,537	46	12,800	27	23,652	18
1912.....	70,817	28	31,808	49	14,639	30	24,370	18
1912.....	70,530	29	31,723	51	14,560	32	24,247	18
1913.....	78,654	32	34,471	55	15,700	34	28,483	21
1914.....	72,660	29	28,987	46	16,226	35	27,447	20

*Number of Other Shopmen.**

1904.....	159,472	75	70,852	126	23,362	65	65,258	54
1905.....	176,348	81	74,853	132	27,181	73	74,314	60
1906.....	199,940	90	87,870	153	31,408	82	80,662	64
1907.....	221,656	97	92,242	159	34,779	89	94,635	73
1908.....	176,680	77	79,740	138	24,962	62	71,978	54
1909.....	195,110	83	85,216	147	24,890	60	85,004	62
1910.....	225,196	94	95,058	164	30,716	73	99,422	71
1911.....	226,785	92	93,487	146	45,257	96	88,041	65
1912.....	249,429	100	103,913	162	53,083	110	92,433	67
1912.....	248,802	103	103,712	167	52,942	117	92,148	69
1913.....	271,095	111	115,756	185	54,817	119	100,522	74
1914.....	255,659	103	105,595	168	52,549	112	97,515	71

* Figures following the break cover only railways with annual operating revenues above $100,000. See page 3.

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TABLE 28—Continued.

*Number of Section Foremen.**

Year.	United States.		Eastern District.		Southern District.		Western District.	
	Number.	Per 100 miles of line.	Number.	Per 100 miles of line.	Number.	Per 100 miles of line.	Number.	Per 100 miles of line.
1904.....	37,609	18	12,981	23	5,611	16	19,017	16
1905.....	38,217	18	13,220	23	5,632	15	19,365	16
1906.....	40,463	18	13,873	24	6,023	16	20,567	16
1907.....	41,391	18	14,056	24	6,224	16	21,111	16
1908.....	41,419	18	13,831	24	6,247	16	21,341	16
1909.....	41,859	18	13,945	24	6,293	15	21,621	16
1910.....	44,207	18	14,359	25	6,528	16	23,320	17
1911.....	44,466	18	15,213	24	7,543	16	21,710	16
1912.....	44,277	18	15,257	24	7,751	16	21,269	15
1912.....	43,328	18	14,989	24	7,475	16	20,864	16
1913.....	44,737	18	15,779	25	7,626	17	21,332	16
1914.....	44,084	18	15,274	24	7,802	17	21,008	15

*Number of Other Trackmen.**

1904.....	289,044	136	105,476	188	41,562	115	142,006	118
1905.....	311,185	143	114,344	202	44,562	120	152,279	124
1906.....	343,791	155	123,496	215	48,666	127	171,629	136
1907.....	367,277	162	128,822	222	51,727	132	186,728	143
1908.....	299,448	130	101,612	176	45,776	114	152,060	115
1909.....	320,762	136	110,316	190	43,000	104	167,446	123
1910.....	378,955	157	129,588	223	48,525	116	200,842	143
1911.....	363,028	147	121,272	190	61,473	130	180,283	134
1912.....	357,326	143	127,486	198	62,647	130	167,193	122
1912.....	351,293	146	126,142	203	60,635	134	164,516	124
1913.....	376,871	154	141,781	226	62,218	135	172,872	127
1914.....	332,480	135	112,303	178	57,051	122	163,126	119

*Number of Switch Tenders, Crossing Tenders, and Watchmen.**

1904.....	46,262	22	25,688	46	5,333	15	15,241	13
1905.....	45,532	21	25,798	46	5,093	14	14,641	12
1906.....	49,659	22	25,518	44	5,991	16	18,150	14
1907.....	53,414	23	29,534	51	6,091	16	17,789	14
1908.....	46,221	20	27,211	47	5,273	13	13,737	10
1909.....	44,698	19	26,883	46	4,808	12	13,007	10
1910.....	44,682	19	28,495	49	4,997	12	11,190	8
1911.....	40,005	16	26,922	42	4,685	10	8,398	6
1912.....	38,773	15	25,882	40	5,009	10	7,882	6
1912.....	38,535	16	25,790	41	4,948	11	7,797	6
1913.....	38,253	16	26,022	42	4,308	9	7,923	6
1914.....	37,671	15	24,828	39	4,752	10	8,091	6

* Figures following the break cover only railways with annual operating revenues above $100,000. See page 3.

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TABLE 28—Continued.

*Number of Telegraph Operators and Dispatchers.**

Year.	United States.		Eastern District.		Southern District.		Western District.	
	Number.	Per 100 miles of line.	Number.	Per 100 miles of line.	Number.	Per 100 miles of line.	Number.	Per 100 miles of line.
1904.....	30,425	14	14,767	26	4,127	11	11,531	10
1905.....	31,963	15	15,261	27	4,381	12	12,321	10
1906.....	36,090	16	16,797	29	5,243	14	14,050	11
1907.....	39,193	17	17,908	31	5,853	15	15,432	12
1908.....	39,744	17	18,682	32	5,797	14	15,265	12
1909.....	39,115	17	18,823	32	5,380	13	14,912	11
1910.....	42,435	18	19,602	34	5,764	14	17,069	12
1911.....	41,196	17	20,566	32	5,773	12	14,857	11
1912.....	42,548	17	21,248	33	6,578	14	14,722	11
1912.....	42,480	18	21,205	34	6,567	14	14,708	11
1913.....	43,061	18	21,140	34	6,565	14	15,356	11
1914.....	40,389	16	20,113	32	6,321	13	13,955	10

*Number of All Other Employees and Laborers.**

(Including floating equipment employees.)

1904.....	168,060	79	79,088	141	17,218	48	71,754	60
1905.....	187,718	86	90,252	159	17,137	46	80,329	65
1906.....	207,050	93	95,385	166	21,639	57	90,026	71
1907.....	237,463	104	107,653	185	27,658	71	102,152	78
1908.....	207,538	90	96,364	167	27,752	69	83,422	63
1909.....	219,656	94	90,579	156	25,640	62	103,437	76
1910.....	240,355	99	106,112	183	29,429	70	104,814	74
1911.....	238,215	97	108,673	170	34,455	73	95,087	70
1912.....	242,194	97	107,317	167	33,414	70	101,463	74
1912.....	241,199	100	107,086	172	33,224	73	100,889	76
1913.....	260,856	107	120,240	192	35,514	77	105,102	77
1914.....	244,225	99	104,727	166	38,252	82	101,246	73

* Figures following the break cover only railways with annual operating revenues above $100,000. See page 3.

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TABLE 29.

AGGREGATE ANNUAL COMPENSATION OF EMPLOYEES.

*Compensation of All Employees.**

Year.	United States.	Eastern District.	Southern District.	Western District.
1904	$817,598,810	$375,756,880	$95,218,700	$346,623,230
1905	839,944,680	385,864,578	100,141,548	353,938,554
1906	900,801,653	422,743,890	114,262,040	363,795,723
1907	1,072,386,427	478,725,152	134,069,807	459,591,468
1908	1,035,437,528	458,577,320	127,933,543	448,926,665
1909	988,323,694	430,724,008	117,686,782	439,912,904
1910	1,143,725,306	494,562,704	132,954,744	516,207,858
1911	1,208,466,470	558,101,577	172,856,304	477,508,589
1912	1,252,347,697	571,429,031	190,389,878	490,528,788
1912	1,245,034,959	569,415,142	188,410,758	487,209,059
1913	1,373,830,589	632,675,701	204,445,231	536,709,657
1914	1,373,422,472	632,689,611	212,422,382	528,310,479

*Compensation of General and Other Officers.**

1904	$25,292,006	$10,195,990	$4,086,354	$11,009,662
1905	26,754,447	10,550,326	4,307,971	11,896,150
1906	28,781,572	11,875,326	4,638,553	12,267,693
1907	32,243,832	13,244,874	5,233,263	13,765,695
1908	32,903,307	13,082,224	5,403,085	14,417,998
1909	33,816,386	13,446,439	5,388,781	14,981,166
1910	37,448,770	14,392,147	5,815,830	17,240,793
1911	39,864,265	16,339,178	6,789,041	16,736,046
1912	41,502,574	16,596,951	7,483,801	17,421,822
1912	40,389,483	16,342,559	7,142,832	16,904,092
1913	42,776,142	17,210,392	7,785,154	17,780,596
1914	44,404,464	17,915,493	8,177,576	18,311,395

*Compensation of General Office Clerks.**

1904	$34,735,708	$15,406,856	$4,942,846	$14,386,006
1905	37,445,570	16,946,770	5,133,997	15,364,803
1906	41,227,916	19,612,572	5,698,143	15,917,201
1907	48,340,123	22,086,219	6,559,973	19,693,931
1908	51,867,978	23,228,314	6,955,025	21,684,639
1909	52,516,034	23,759,052	6,877,611	21,879,371
1910	58,176,906	25,891,997	7,748,535	24,536,374
1911	61,971,046	30,038,608	8,347,493	23,584,945
1912	64,739,954	30,890,301	9,151,112	24,698,541
1912	64,507,344	30,826,977	9,089,323	24,591,044
1913	69,443,296	33,764,501	9,459,255	26,219,540
1914	75,167,590	36,617,529	10,291,160	28,258,901

* Figures following the break cover only railways with annual operating revenues above $100,000. See page 8. Entries for the United States and Western district in 1906 do not include compensation paid by Southern Pacific Co., whose records were destroyed by fire.

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TABLE 29—Continued.

*Compensation of Station Agents.**

Year.	United States.	Eastern District.	Southern District.	Western District.
1904	$22,584,269	$9,420,432	$3,213,848	$9,949,989
1905	23,112,137	9,382,329	3,354,044	10,375,764
1906	22,571,595	9,240,392	3,508,395	9,822,808
1907	24,831,066	9,990,444	3,820,655	11,019,967
1908	25,908,206	10,243,958	4,008,452	11,655,796
1909	25,881,387	10,253,907	3,974,198	11,653,282
1910	27,203,943	10,532,819	4,171,259	12,499,865
1911	28,922,662	11,775,573	5,301,162	11,845,927
1912	29,935,642	12,019,702	5,629,638	12,286,302
1912	29,440,268	11,872,752	5,482,376	12,085,140
1913	30,016,048	11,756,252	5,811,590	12,448,206
1914	31,283,861	12,223,876	6,070,545	12,989,440

*Compensation of Other Station Men.**

1904	$66,318,729	$36,722,918	$7,258,999	$22,336,812
1905	67,012,465	36,356,808	7,948,230	22,707,427
1906	70,702,517	38,486,726	8,981,761	23,234,030
1907	84,244,486	43,603,565	10,522,159	30,118,762
1908	81,766,135	42,888,876	9,962,672	28,914,587
1909	79,089,030	41,651,430	9,285,134	28,152,466
1910	88,926,764	46,323,577	10,066,847	32,536,340
1911	95,317,815	51,470,197	13,669,248	30,178,370
1912	97,612,039	51,673,714	14,953,189	30,985,136
1912	97,429,226	51,613,271	14,900,808	30,915,147
1913	106,242,920	56,764,234	16,098,518	33,380,168
1914	108,943,057	58,229,187	16,332,384	34,381,486

*Compensation of Enginemen.**

1904	$68,946,543	$31,823,340	$8,989,046	$28,134,157
1905	70,626,750	32,475,836	9,456,034	28,694,880
1906	74,581,454	34,498,928	10,451,619	29,630,907
1907	87,496,778	38,759,235	12,300,003	36,437,540
1908	84,517,730	37,153,483	11,505,644	35,858,603
1909	78,988,116	33,975,945	10,511,778	34,500,393
1910	91,323,678	39,396,294	11,849,915	40,077,469
1911	97,167,687	45,687,915	15,021,307	36,458,465
1912	102,762,809	46,932,577	17,299,773	38,530,459
1912	102,131,478	46,766,349	17,127,440	38,237,689
1913	111,350,613	52,255,596	18,057,343	41,037,674
1914	108,727,032	50,760,320	18,438,765	39,527,947

* Figures following the break cover only railways with annual operating revenues above $100,000. See page 3. Entries for the United States and Western district in 1906 do not include compensation paid by Southern Pacific Co., whose records were destroyed by fire.

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TABLE 29—Continued.

*Compensation of Firemen.**

Year.	United States.	Eastern District.	Southern District.	Western District.
1904	$40,463,040	$18,931,430	$4,436,611	$17,094,999
1905	41,701,463	19,400,153	4,710,690	17,590,620
1906	44,247,306	20,631,902	5,257,405	18,357,999
1907	52,474,059	23,530,616	6,266,772	22,676,671
1908	50,747,825	22,277,144	5,953,609	22,517,072
1909	48,294,077	21,323,360	5,321,310	21,649,407
1910	55,626,502	23,855,272	6,047,565	25,723,665
1911	59,825,811	27,904,846	8,094,831	23,826,134
1912	62,117,000	28,746,237	9,217,396	24,153,367
1912	61,731,229	28,639,433	9,123,705	23,968,091
1913	67,238,331	31,477,579	10,002,521	25,758,231
1914	66,746,255	31,927,585	10,251,238	24,567,432

*Compensation of Conductors.**

1904	$44,150,760	$21,372,189	$5,032,600	$17,745,971
1905	44,758,533	21,438,926	5,195,360	18,124,247
1906	47,417,403	22,842,639	6,049,094	18,525,670
1907	55,847,244	25,999,254	7,446,308	22,401,682
1908	55,479,055	25,459,125	7,008,278	23,011,652
1909	51,873,772	23,364,582	6,629,923	21,879,267
1910	59,716,891	26,980,714	7,294,887	25,441,290
1911	65,793,064	31,475,164	10,539,424	23,778,476
1912	68,695,203	32,077,717	11,644,315	24,973,171
1912	68,219,798	31,942,252	11,524,899	24,752,647
1913	73,261,603	34,299,911	12,328,225	26,633,467
1914	73,032,660	34,553,934	12,957,105	25,521,621

*Compensation of Other Trainmen.**

1904	$75,521,384	$39,066,367	$7,174,838	$29,280,179
1905	77,416,200	39,632,078	7,630,058	30,154,064
1906	81,884,828	42,391,837	8,773,020	30,719,971
1907	99,978,356	49,479,839	11,025,734	39,472,783
1908	97,456,690	47,319,175	10,788,047	39,349,468
1909	89,710,526	42,168,671	9,201,597	38,340,258
1910	109,664,112	49,952,155	10,536,810	49,175,147
1911	120,665,943	59,395,230	15,039,734	46,230,979
1912	127,060,109	62,369,067	16,893,390	47,797,652
1912	126,557,319	62,203,953	16,765,332	47,588,034
1913	139,409,443	68,497,086	18,732,841	52,179,516
1914	139,005,561	68,482,045	19,629,141	50,894,375

* Figures following the break cover only railways with annual operating revenues above $100,000. See page 8. Entries for the United States and Western district in 1906 do not include compensation paid by Southern Pacific Co., whose records were destroyed by fire.

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TABLE 29—Continued.

*Compensation of Machinists.**

Year.	United States.	Eastern District.	Southern District.	Western District.
1904	$37,344,571	$18,215,488	$4,019,916	$15,109,167
1905	37,495,267	18,426,289	4,105,408	14,963,570
1906	40,326,031	21,059,438	4,840,313	14,426,280
1907	46,475,695	23,354,677	5,271,563	17,849,455
1908	42,368,436	21,433,508	4,635,951	16,298,977
1909	41,731,839	19,966,545	4,415,081	17,350,213
1910	48,589,476	23,756,705	5,365,691	19,467,080
1911	51,442,148	26,759,959	6,837,972	17,844,217
1912	54,327,638	28,628,347	7,611,387	18,087,904
1912	54,137,798	28,581,117	7,548,032	18,008,649
1913	60,008,941	31,527,844	7,575,514	20,905,583
1914	58,026,444	31,532,430	7,426,640	19,067,374

*Compensation of Carpenters.**

1904	$36,654,270	$15,911,760	$5,296,743	$15,445,767
1905	36,501,025	16,185,099	5,456,513	14,859,413
1906	40,961,083	19,186,374	6,359,591	15,415,118
1907	49,082,659	21,878,135	6,864,980	20,339,544
1908	44,552,855	19,179,500	6,809,861	18,563,494
1909	43,420,646	18,516,139	5,874,567	19,029,940
1910	50,058,065	21,268,538	6,549,239	22,240,288
1911	49,892,732	22,284,018	8,470,764	19,137,950
1912	53,241,527	23,420,045	10,006,928	19,814,554
1912	53,098,957	23,376,981	9,973,463	19,748,513
1913	61,318,197	26,812,392	11,137,815	23,367,990
1914	60,107,640	25,502,680	11,887,963	22,716,997

*Compensation of Other Shopmen.**

1904	$94,463,049	$41,582,311	$11,808,912	$41,071,826
1905	101,164,035	42,822,583	13,392,544	44,948,908
1906	111,524,564	51,049,849	15,275,904	45,198,811
1907	132,421,765	55,963,718	17,843,245	58,614,802
1908	121,695,515	53,253,122	14,735,782	53,706,611
1909	119,909,837	52,166,318	13,051,143	54,692,376
1910	145,457,974	60,655,730	16,562,871	68,239,373
1911	155,438,461	65,186,298	25,367,658	64,884,505
1912	167,807,528	71,408,610	29,606,131	66,792,787
1912	167,511,163	71,314,796	29,547,999	66,648,368
1913	191,645,024	82,702,156	32,802,750	76,140,118
1914	191,114,803	82,275,983	33,686,919	75,151,901

* Figures following the break cover only railways with annual operating revenues above $100,000. See page 3. Entries for the United States and Western district in 1906 do not include compensation paid by Southern Pacific Co., whose records were destroyed by fire.

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TABLE 29—Continued.

*Compensation of Section Foremen.**

Year.	United States.	Eastern District.	Southern District.	Western District.
1904	$22,555,363	$8,058,287	$3,094,433	$11,402,643
1905	23,041,754	8,223,602	3,109,671	11,708,481
1906	23,519,671	8,606,374	3,353,771	11,559,526
1907	26,326,635	9,243,909	3,651,305	13,431,421
1908	27,658,733	9,607,972	3,731,159	14,319,602
1909	27,405,664	9,523,389	3,717,091	14,165,184
1910	29,424,298	9,870,196	3,924,091	15,630,011
1911	31,268,187	11,276,108	4,874,099	15,117,980
1912	31,758,239	11,367,354	5,157,128	15,233,757
1912	31,220,226	11,217,803	5,010,091	14,992,332
1913	32,894,238	11,956,382	5,368,074	15,569,782
1914	33,828,242	12,465,164	5,573,456	15,789,622

*Compensation of Other Trackmen.**

1904	$104,600,785	$41,960,489	$12,450,486	$50,189,810
1905	103,413,280	43,332,199	12,287,899	47,793,182
1906	112,196,214	47,471,672	14,126,909	50,597,633
1907	135,793,476	51,966,475	16,313,258	67,513,743
1908	122,994,426	45,465,039	14,771,021	62,758,366
1909	110,769,229	40,066,897	13,075,181	57,627,151
1910	140,200,782	50,926,362	14,687,812	74,586,608
1911	137,893,137	54,809,686	18,027,462	65,055,989
1912	136,067,014	54,606,873	19,586,959	61,873,182
1912	134,387,444	54,174,860	19,117,192	61,095,392
1913	156,806,395	62,591,225	21,151,020	73,064,150
1914	146,333,520	58,124,678	20,672,366	67,536,476

*Compensation of Switch Tenders, Crossing Tenders, and Watchmen.**

1904	$26,920,495	$13,859,983	$2,608,224	$10,452,288
1905	26,355,957	14,129,406	2,597,025	9,629,526
1906	27,939,001	13,735,029	3,313,489	10,890,483
1907	32,184,636	16,213,339	3,058,402	12,912,895
1908	27,607,830	14,754,405	2,514,526	10,338,899
1909	25,521,433	14,211,453	2,258,519	9,051,461
1910	24,880,701	15,370,983	2,432,643	7,077,075
1911	22,835,972	15,415,134	2,372,367	5,048,471
1912	22,982,964	15,146,139	2,356,840	5,479,985
1912	22,879,796	15,111,181	2,334,746	5,433,869
1913	22,422,731	15,432,491	1,839,643	5,150,597
1914	22,820,637	15,449,171	2,352,088	5,019,378

* Figures following the break cover only railways with annual operating revenues above $100,000. See page 3. Entries for the United States and Western district in 1906 do not include compensation paid by Southern Pacific Co., whose records were destroyed by fire.

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TABLE 29—Continued.

*Compensation of Telegraph Operators and Dispatchers.**

Year.	United States.	Eastern District.	Southern District.	Western District.
1904	$21,770,296	$10,228,682	$2,632,027	$8,909,587
1905	22,638,034	10,500,268	2,831,148	9,306,618
1906	24,729,669	11,371,233	3,444,676	9,913,760
1907	29,058,251	12,721,050	4,254,934	12,082,267
1908	30,989,257	13,655,095	4,343,973	12,990,189
1909	29,896,851	13,819,080	3,861,414	12,216,357
1910	32,348,603	14,352,125	4,085,203	13,911,275
1911	34,398,705	16,543,259	4,715,263	13,140,183
1912	34,890,615	16,369,109	5,313,688	13,207,818
1912	34,858,621	16,353,184	5,306,012	13,199,425
1913	36,519,803	16,999,331	5,533,207	13,987,265
1914	36,528,601	17,449,120	5,537,803	13,541,678

*Compensation of All Other Employees and Laborers.**

(Including floating equipment employees.)

1904	$95,277,542	$43,000,358	$8,172,817	$44,104,367
1905	100,507,763	46,061,906	8,624,956	45,820,901
1906	108,190,829	50,683,599	10,189,397	47,317,833
1907	135,587,366	60,689,803	13,637,253	61,260,310
1908	136,923,550	59,576,380	14,806,458	62,540,712
1909	129,498,867	52,510,801	14,243,454	62,744,612
1910	144,677,841	61,037,090	15,815,546	67,825,205
1911	155,768,835	71,740,404	19,388,479	64,639,952
1912	156,846,842	69,176,288	18,478,203	69,192,351
1912	156,534,809	69,077,674	18,416,508	69,040,627
1913	172,476,864	78,628,329	20,761,761	73,086,774
1914	177,352,105	79,180,416	23,137,233	75,034,456

* Figures following the break cover only railways with annual operating revenues above $100,000. See page 3. Entries for the United States and Western district in 1906 do not include compensation paid by Southern Pacific Co., whose records were destroyed by fire.

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TABLE 30.

AVERAGE DAILY COMPENSATION OF EMPLOYEES.

*Average Daily Compensation of All Employees.**

Year.	United States.	Eastern District.	Southern District.	Western District.
1904	$2.05	$2.05	$1.72	$2.17
1905	2.07	2.06	1.78	2.18
1906	2.08	2.09	1.82	2.17
1907	2.20	2.20	1.93	2.29
1908	2.25	2.26	1.94	2.34
1909	2.24	2.26	1.96	2.30
1910	2.29	2.31	2.00	2.36
1911	2.39	2.46	2.14	2.42
1912	2.42	2.48	2.20	2.46
1912	2.43	2.49	2.20	2.46
1913	2.49	2.54	2.28	2.52
1914	2.53	2.61	2.33	2.54

*Average Daily Compensation of General and Other Officers.**

1904	$8.35	$8.64	$6.35	$9.14
1905	8.32	8.55	6.36	9.11
1906	8.08	7.99	6.65	8.92
1907	8.16	8.25	6.32	9.08
1908	8.44	8.93	6.10	9.33
1909	8.45	8.97	6.43	8.99
1910	8.35	9.19	6.62	8.44
1911	8.22	9.13	6.53	8.29
1912	8.33	9.07	6.45	8.75
1912	8.68	9.30	6.72	9.21
1913	8.80	9.36	6.76	9.50
1914	8.94	9.74	6.83	9.49

*Average Daily Compensation of General Office Clerks.**

1904	$2.22	$2.32	$2.00	$2.20
1905	2.24	2.36	2.05	2.19
1906	2.24	2.31	2.07	2.23
1907	2.30	2.36	2.13	2.30
1908	2.33	2.41	2.10	2.34
1909	2.31	2.44	2.17	2.22
1910	2.40	2.52	2.22	2.35
1911	2.49	2.56	2.39	2.44
1912	2.50	2.57	2.41	2.45
1912	2.50	2.57	2.42	2.46
1913	2.51	2.57	2.41	2.48
1914	2.54	2.60	2.45	2.50

* Figures following the break cover only railways with annual operating revenues above $100,000.

See page 3; also footnote on page 34.

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TABLE 30—Continued.

*Average Daily Compensation of Station Agents.**

Year.	United States.	Eastern District.	Southern District.	Western District.
1904	$1.93	$1.90	$1.62	$2.09
1905	1.93	1.90	1.66	2.08
1906	1.94	1.94	1.67	2.07
1907	2.05	2.04	1.76	2.18
1908	2.09	2.10	1.78	2.21
1909	2.08	2.08	1.82	2.19
1910	2.12	2.14	1.84	2.20
1911	2.17	2.24	1.93	2.24
1912	2.20	2.26	1.98	2.26
1912	2.22	2.28	2.00	2.28
1913	2.28	2.36	2.06	2.31
1914	2.33	2.43	2.11	2.35

*Average Daily Compensation of Other Station Men.**

1904	$1.69	$1.77	$1.26	$1.77
1905	1.71	1.77	1.37	1.76
1906	1.69	1.75	1.39	1.74
1907	1.78	1.82	1.47	1.85
1908	1.82	1.88	1.47	1.88
1909	1.82	1.87	1.49	1.87
1910	1.84	1.91	1.50	1.88
1911	1.89	1.97	1.61	1.91
1912	1.89	1.97	1.62	1.91
1912	1.89	1.97	1.62	1.92
1913	1.96	2.04	1.75	1.94
1914	1.98	2.08	1.73	1.97

*Average Daily Compensation of Enginemen.**

1904	$4.10	$3.97	$4.23	$4.22
1905	4.12	3.96	4.27	4.26
1906	4.12	3.98	4.33	4.23
1907	4.30	4.15	4.57	4.36
1908	4.45	4.30	4.52	4.59
1909	4.44	4.29	4.45	4.61
1910	4.55	4.39	4.63	4.70
1911	4.79	4.71	4.85	4.90
1912	5.00	4.82	5.27	5.13
1912	5.02	4.83	5.32	5.15
1913	5.20	5.06	5.51	5.25
1914	5.24	5.11	5.67	5.23

* Figures following the break cover only railways with annual operating revenues above $100,000. See page 3; also footnote on page 34.

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TABLE 30—Continued.

*Average Daily Compensation of Firemen.**

Year.	United States.	Eastern District.	Southern District.	Western District.
1904	$2.35	$2.29	$2.04	$2.54
1905	2.38	2.32	2.00	2.58
1906	2.42	2.37	2.08	2.60
1907	2.54	2.47	2.26	2.70
1908	2.64	2.56	2.23	2.87
1909	2.67	2.58	2.24	2.90
1910	2.74	2.63	2.32	2.98
1911	2.94	2.88	2.57	3.22
1912	3.02	2.94	2.81	3.25
1912	3.03	2.95	2.84	3.26
1913	3.13	3.03	3.02	3.33
1914	3.22	3.20	3.10	3.31

*Average Daily Compensation of Conductors.**

1904	$3.50	$3.34	$3.22	$3.81
1905	3.50	3.34	3.22	3.82
1906	3.51	3.33	3.32	3.84
1907	3.69	3.48	3.67	3.98
1908	3.81	3.59	3.65	4.14
1909	3.81	3.58	3.56	4.19
1910	3.91	3.71	3.63	4.27
1911	4.16	4.03	4.00	4.46
1912	4.29	4.11	4.25	4.61
1912	4.30	4.12	4.29	4.64
1913	4.39	4.17	4.49	4.69
1914	4.47	4.29	4.60	4.69

*Average Daily Compensation of Other Trainmen.**

1904	$2.27	$2.24	$1.76	$2.48
1905	2.31	2.28	1.81	2.52
1906	2.35	2.36	1.89	2.50
1907	2.54	2.53	2.08	2.72
1908	2.60	2.60	2.06	2.79
1909	2.59	2.57	2.03	2.80
1910	2.69	2.68	2.08	2.87
1911	2.88	2.94	2.43	3.00
1912	2.96	3.00	2.57	3.11
1912	2.97	3.00	2.59	3.12
1913	3.04	3.05	2.78	3.13
1914	3.09	3.14	2.86	3.12

* Figures following the break cover only railways with annual operating revenues above $100,000. See page 8; also footnote on page 34.

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TABLE 30—Continued.

*Average Daily Compensation of Machinists.**

Year.	United States.	Eastern District.	Southern District.	Western District.
1904	$2.61	$2.46	$2.59	$2.82
1905	2.65	2.47	2.66	2.92
1906	2.69	2.55	2.74	2.90
1907	2.87	2.68	2.87	3.15
1908	2.95	2.78	2.94	3.23
1909	2.98	2.79	2.85	3.26
1910	3.08	2.90	2.93	3.38
1911	3.14	2.98	3.09	3.47
1912	3.21	3.04	3.24	3.56
1912	3.21	3.04	3.25	3.57
1913	3.26	3.09	3.28	3.55
1914	3.27	3.13	3.33	3.52

*Average Daily Compensation of Carpenters.**

1904	$2.26	$2.23	$1.97	$2.41
1905	2.25	2.24	2.00	2.38
1906	2.28	2.33	2.03	2.33
1907	2.40	2.43	2.16	2.45
1908	2.40	2.42	2.16	2.47
1909	2.43	2.42	2.21	2.52
1910	2.51	2.51	2.23	2.59
1911	2.54	2.60	2.37	2.56
1912	2.55	2.63	2.38	2.57
1912	2.55	2.62	2.38	2.56
1913	2.63	2.70	2.47	2.62
1914	2.66	2.75	2.49	2.66

*Average Daily Compensation of Other Shopmen.**

1904	$1.91	$1.88	$1.62	$2.06
1905	1.92	1.90	1.65	2.05
1906	1.92	1.93	1.66	2.01
1907	2.06	2.05	1.76	2.18
1908	2.12	2.11	1.84	2.22
1909	2.13	2.11	1.84	2.23
1910	2.18	2.18	1.90	2.27
1911	2.24	2.29	1.98	2.31
1912	2.24	2.28	1.96	2.34
1912	2.24	2.29	1.97	2.34
1913	2.31	2.36	2.09	2.37
1914	2.36	2.43	2.11	2.42

* Figures following the break cover only railways with annual operating revenues above $100,000. See page 3; also footnote on page 34.

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TABLE 30—Continued.

*Average Daily Compensation of Section Foremen.**

Year.	United States.	Eastern District.	Southern District.	Western District.
1904	$1.78	$1.87	$1.61	$1.78
1905	1.79	1.88	1.62	1.78
1906	1.80	1.89	1.68	1.77
1907	1.90	1.99	1.73	1.89
1908	1.95	2.04	1.75	1.96
1909	1.96	2.04	1.78	1.96
1910	1.99	2.09	1.81	1.98
1911	2.07	2.17	1.92	2.05
1912	2.09	2.18	1.96	2.08
1912	2.09	2.18	1.96	2.08
1913	2.14	2.25	2.03	2.11
1914	2.20	2.35	2.07	2.14

*Average Daily Compensation of Other Trackmen.**

1904	$1.33	$1.36	$1.01	$1.41
1905	1.32	1.36	1.04	1.37
1906	1.36	1.42	1.07	1.41
1907	1.46	1.50	1.15	1.52
1908	1.45	1.54	1.14	1.48
1909	1.38	1.49	1.12	1.38
1910	1.47	1.56	1.15	1.49
1911	1.50	1.63	1.21	1.49
1912	1.50	1.64	1.24	1.48
1912	1.50	1.64	1.24	1.48
1913	1.58	1.69	1.28	1.61
1914	1.59	1.73	1.29	1.60

*Average Daily Compensation of Switch Tenders, Crossing Tenders, and Watchmen.**

1904	$1.77	$1.63	$1.53	$2.10
1905	1.79	1.66	1.67	2.06
1906	1.80	1.62	1.76	2.12
1907	1.87	1.68	1.64	2.26
1908	1.78	1.63	1.44	2.18
1909	1.73	1.61	1.40	2.11
1910	1.69	1.65	1.40	1.91
1911	1.74	1.75	1.48	1.85
1912	1.70	1.73	1.38	1.81
1912	1.70	1.72	1.39	1.81
1913	1.70	1.75	1.27	1.78
1914	1.71	1.77	1.39	1.73

* Figures following the break cover only railways with annual operating revenues above $100,000. See page 3; also footnote on page 34.

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TABLE 30—Continued.

*Average Daily Compensation of Telegraph Operators and Dispatchers.**

Year.	United States.	Eastern District.	Southern District.	Western District.
1904	$2.15	$2.10	$1.85	$2.32
1905	2.19	2.13	2.00	2.34
1906	2.13	2.04	2.04	2.28
1907	2.26	2.17	2.16	2.40
1908	2.30	2.22	2.13	2.45
1909	2.30	2.20	2.15	2.48
1910	2.33	2.23	2.19	2.49
1911	2.44	2.36	2.30	2.61
1912	2.47	2.38	2.36	2.63
1912	2.47	2.39	2.37	2.63
1913	2.52	2.42	2.43	2.70
1914	2.56	2.47	2.48	2.72

*Average Daily Compensation of All Other Employees and Laborers.**

(Including floating equipment employees.)

1904	$1.83	$1.76	$1.51	$1.99
1905	1.85	1.76	1.55	2.02
1906	1.84	1.79	1.57	1.98
1907	1.93	1.86	1.67	2.08
1908	1.99	1.91	1.69	2.16
1909	1.99	1.92	1.77	2.12
1910	2.02	1.93	1.79	2.17
1911	2.09	2.10	1.88	2.19
1912	2.11	2.11	1.89	2.20
1912	2.12	2.12	1.89	2.20
1913	2.17	2.16	1.91	2.26
1914	2.21	2.21	1.97	2.30

* Figures following the break cover only railways with annual operating revenues above $100,000. See page 3; also footnote on page 34.

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TABLE 31. **NUMBER OF LOCOMOTIVES.***

Year.	United States.		Eastern District.		Southern District.		Western District.	
	Number.	Per 1,000 miles of line.	Number.	Per 1,000 miles of line.	Number.	Per 1,000 miles of line.	Number.	Per 1,000 miles of line.
1904....	46,743	220	21,547	384	5,792	161	19,404	161
1905....	48,357	223	22,247	393	6,162	166	19,948	162
1906....	51,672	232	23,953	416	6,668	174	21,051	166
1907....	55,388	243	25,029	431	7,400	189	22,959	176
1908....	56,733	246	25,256	437	7,727	193	23,750	179
1909....	57,212	243	25,311	437	7,772	188	24,129	177
1910....	58,947	245	25,898	446	7,802	186	25,247	179
1911....	61,327	249	28,233	442	9,661	205	23,433	174
1912....	62,262	249	28,267	440	10,086	209	23,909	174
1912....	61,276	255	28,031	450	9,769	215	23,476	177
1913....	63,378	259	28,659	457	10,246	222	24,473	180
1914....	64,760	262	29,487	467	10,478	224	24,795	180

TABLE 32. **TRACTIVE POWER OF LOCOMOTIVES.***

Year.	United States.		Eastern District.		Southern District.		Western District.	
	Aggregate tractive power.	Average tractive power per locomotive.	Aggregate tractive power.	Average tractive power per locomotive.	Aggregate tractive power.	Average tractive power per locomotive.	Aggregate tractive power.	Average tractive power per locomotive.
	(pounds)	(pounds)	(pounds)	(pounds)	(pounds)	(pounds)	(pounds)	(pounds)
1904...	1,052,307,261	22,804	.....	.....	.....	.....	.....	.....
1905...	1,128,771,082	23,666	.....	.....	.....	.....	.....	.....
1906...	1,260,633,673	24,741	.....	.....	.....	.....	.....	.....
1907...	1,409,006,658	25,823	.....	.....	.....	.....	.....	.....
1908...	1,477,756,536	26,384	.....	.....	.....	.....	.....	.....
1909...	1,503,971,444	26,634	.....	.....	.....	.....	.....	.....
1910...	1,588,894,480	27,282	.....	.....	.....	.....	.....	.....
1911...	1,681,495,905	27,949	805,151,361	28,884	257,268,117	27,320	619,076,427	27,069
1912...	1,746,964,128	28,634	827,056,235	29,702	277,923,237	28,264	641,984,656	27,515
1912...	1,735,466,148	28,766	824,520,356	29,774	274,488,809	28,518	636,456,983	27,656
1913...	1,847,798,393	29,702	867,533,046	30,658	291,181,129	29,168	689,084,218	28,795
1914...	1,931,953,982	30,420	918,607,441	31,576	303,215,958	29,750	710,130,583	29,313

* Figures following the break cover only railways with annual operating revenues above $100,000. See page 3. Entries for 1908 taken from later tabulations of the Interstate Commerce Commission.

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TABLE 33.

NUMBER OF CARS—ALL KINDS.*

Year.	United States.		Eastern District.		Southern District.		Western District.	
	Number.	Per 1,000 miles of line.	Number.	Per 1,000 miles of line.	Number.	Per 1,000 miles of line.	Number.	Per 1,000 miles of line.
1904....	1,798,561	8,474	870,059	15,536	210,572	5,843	717,330	5,970
1905....	1,842,871	8,494	880,140	15,555	226,191	6,096	736,540	5,974
1906....	1,958,912	8,810	933,024	16,221	251,366	6,573	774,522	6,119
1907....	2,126,594	9,350	1,003,150	17,277	293,230	7,506	830,214	6,370
1908....	2,231,181	9,680	1,048,873	18,161	307,110	7,664	875,198	6,597
1909....	2,218,280	9,423	1,032,172	17,820	308,807	7,482	877,301	6,441
1910....	2,290,331	9,510	1,062,844	18,291	313,834	7,483	913,653	6,490
1911....	2,359,335	9,586	1,151,283	18,010	405,778	8,606	802,274	5,940
1912....	2,382,674	9,536	1,160,521	18,053	410,260	8,523	811,893	5,907
1912....	2,368,942	9,853	1,156,611	18,575	406,942	8,963	805,389	6,068
1913....	2,445,508	10,005	1,185,603	18,916	412,812	8,943	847,093	6,248
1914....	2,503,822	10,121	1,194,811	18,939	425,424	9,097	883,587	6,424

TABLE 34.

NUMBER OF PASSENGER-SERVICE CARS.*

Year.	United States.		Eastern District.		Southern District.		Western District.	
	Number.	Per 1,000 miles of line.	Number.	Per 1,000 miles of line.	Number.	Per 1,000 miles of line.	Number.	Per 1,000 miles of line.
1904....	39,752	187	20,960	374	4,370	121	14,422	120
1905....	40,713	188	21,287	376	4,595	124	14,831	120
1906....	42,262	190	21,853	380	4,861	127	15,548	123
1907....	43,973	193	22,520	388	5,164	132	16,289	125
1908....	45,117	196	23,096	400	5,219	130	16,802	127
1909....	45,584	193	23,141	400	5,315	129	17,128	126
1910....	47,095	195	23,230	400	5,500	131	18,365	130
1911....	49,818	203	24,974	391	6,584	140	18,260	135
1912....	51,490	206	25,709	400	6,846	142	18,935	138
1912....	50,575	210	25,401	408	6,566	145	18,608	140
1913....	51,700	211	25,771	411	6,865	149	19,064	141
1914....	53,466	216	26,460	419	7,196	154	19,810	144

* Figures following the break cover only railways with annual operating revenues above $100,000. See page 3. Entries for 1908 taken from later tabulations of the Interstate Commerce Commission.

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TABLE 35.

NUMBER OF FREIGHT CARS.*

Year.	United States.		Eastern District.		Southern District.		Western District.	
	Number.	Per 1,000 miles of line.	Number.	Per 1,000 miles of line.	Number.	Per 1,000 miles of line.	Number.	Per 1,000 miles of line.
1904....	1,692,194	7,973	824,523	14,712	198,114	5,497	669,557	5,572
1905....	1,731,409	7,980	831,315	14,692	212,268	5,721	687,826	5,579
1906....	1,837,914	8,266	879,472	15,290	236,148	6,175	722,294	5,706
1907....	1,991,557	8,756	945,841	16,290	276,250	7,071	769,466	5,904
1908....	2,089,302	9,064	990,316	17,147	288,648	7,203	810,338	6,108
1909....	2,073,606	8,809	973,921	16,814	290,093	7,029	809,592	5,944
1910....	2,135,121	8,866	1,002,305	17,249	294,617	7,024	838,199	5,954
1911....	2,195,511	8,920	1,085,110	16,975	382,189	8,105	728,212	5,392
1912....	2,215,549	8,867	1,092,092	16,988	385,781	8,015	737,676	5,367
1912....	2,203,423	9,165	1,088,699	17,484	382,943	8,435	731,781	5,513
1913....	2,273,564	9,302	1,116,380	17,812	387,522	8,395	769,662	5,677
1914....	2,325,647	9,401	1,122,688	17,796	399,132	8,535	803,827	5,844

TABLE 36.

CAPACITY OF FREIGHT CARS—UNITED STATES.*

Year.	Aggregate capacity.	Average capacity per freight car.
	(tons)	(tons)
1904	50,759,133	30
1905	53,255,083	31
1906	59,059,302	32
1907	67,033,324	34
1908	72,663,665	35
1909	73,137,546	35
1910	76,578,735	36
1911	81,077,028	37
1912	82,965,418	37
1912	.....	..
1913	86,978,145	38
1914	90,977,098	39

* Figures following the break cover only railways with annual operating revenues above $100,000. See page 3. Entries for 1908 taken from later tabulations of the Interstate Commerce Commission.

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TABLE 37. **NUMBER OF CARS BY CLASSES—UNITED STATES.***

Year.	Passenger.		Dining, parlor, and sleeping.		Baggage, express, and postal.		Other passenger.		Box.		Flat.	
	Number.	Per 1,000 miles of line.	Number.	Per 1,000 miles of line.	Number.	Per 1,000 miles of line.	Number.	Per 1,000 miles. of line	Number.	Per 1,000 miles of line	Number.	Per 1,000 miles of line
1904.....	27,766	131	1,586	7	9,345	44	1,055	5	782,897	3,689	147,620	696
1905.....	28,213	130	1,767	8	9,450	44	1,283	6	804,379	3,707	146,716	676
1906.....	29,110	131	1,903	9	9,892	44	1,357	6	844,936	3,800	147,900	665
1907.....	29,960	132	2,000	9	10,379	45	1,634	7	906,687	3,986	158,222	696
1908.....	30,285	131	1,991	9	10,864	47	1,977	9	950,095	4,122	160,076	694
1909.....	30,960	131	1,948	8	10,997	47	1,679	7	942,373	4,003	154,809	658
1910a....	31,675	131	2,074	9	11,524	48	1,802	7	966,603	4,014	153,958	639
1911.....	32,946	134	2,422	10	12,269	50	2,181	9	990,324	4,024	153,320	623
1912.....	33,856	136	2,505	10	12,766	51	2,363	9	1,004,030	4,019	150,898	604
1912.....	33,089	138	2,496	10	12,704	53	2.286	10	1,002,582	4,170	146,153	608
1913.....	33,672	138	2,393	10	12,943	53	2,692	11	1,032,737	4,225	147,604	604
1914.....	34,432	139	2,479	10	13,607	55	2,948	12	1,043,796	4,219	146,133	591

Year.	Stock.		Coal.		Tank.		Refrigerator.		Other freight.		Company service.	
	Number.	Per 1,000 miles of line.	Number	Per 1,000 miles of line.	Number	Per 1,000 miles of line.	Number.	Per 1,000 miles. of line	Number.	Per 1,000 miles of line	Number.	Per 1,000 miles of line
1904.....	64,534	304	623,002	2,935	4,521	21	22,758	107	46,862	221	66,615	314
1905.....	63,407	292	632,913	2,917	5,163	24	26,847	124	51,984	240	70,749	326
1906.....	64,462	290	687,457	3,092	5,326	24	31,795	143	56,038	252	78,736	354
1907.....	70,416	310	748,123	3,289	5,974	26	33,644	148	68,491	301	91,064	400
1908.....	76,519	332	798,911	3,466	6,698	29	27,953	121	69,050	300	96,762	420
1909.....	73,661	313	792,499	3,367	6,631	28	28,210	120	75,423	320	99,090	421
1910a....	78,811	327	818,731	3,400	7,434	31	30,918	128	78,666	327	108,115	449
1911.....	77,590	315	853,719	3,469	7,787	32	31,786	129	80,985	328	114,006	463
1912.....	76,536	306	855,112	3,422	7,836	31	30,693	123	90,444	362	115,635	463
1912.....	76,423	318	852,759	3,547	7,795	32	30,686	128	87,025	362	114,944	478
1913.....	78,308	320	871,379	3,565	8,216	34	43,389	178	91,931	376	120,244	492
1914.....	82,971	335	890,314	3,635	8,530	35	48,886	198	96,017	388	124,709	504

* Figures following the break cover only railways with annual operating revenues above $100,000. See page 3. Entries for 1908 taken from later tabulations of the Interstate Commerce Commission.
(a) Excludes 20 cars unclassified.

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TABLE 38.

FREIGHT TRAFFIC MOVEMENT.

*All Commodities.**

(Exclusive of tonnage unassigned to commodity groups.)

Year.	United States.		Easetrn District.		Southern District.		Western District.	
	Tonnage originating on line.	Per cent of total.	Tonnage originating on line.	Per cent of total.	Tonnage originating on line.	Per cent of total.	Tonnage originating on line.	Per cent of total.
	(tons)		(tons)		(tons)		(tons)	
1904	641,680,547	100.00	345,874,297	100.00	88,846,457	100.00	206,959,793	100.00
1905	715,663,442	100.00	387,987,570	100.00	93,959,210	100.00	233,716,662	100.00
1906	820,164,627	100.00	448,521,985	100.00	104,827,715	100.00	266,814,927	100.00
1907	893,184,972	100.00	481,601,404	100.00	115,580,170	100.00	296,003,398	100.00
1908	797,216,099	100.00	424,622,558	100.00	113,653,075	100.00	258,940,466	100.00
1909	826,492,765	100.00	408,649,701	100.00	120,793,459	100.00	297,049,605	100.00
1910	968,464,009	100.00	471,213,275	100.00	146,028,659	100.00	351,222,075	100.00
1911	967,233,991	100.00	493,763,010	100.00	166,984,047	100.00	306,486,934	100.00
1912	998,282,525	100.00	511,970,609	100.00	171,717,393	100.00	314,594,523	100.00
1912	979,370,603	100.00	.....	.....	.....	.....	.....	.....
1913	1,144,840,303	100.00	578,382,786	100.00	178,688,390	100.00	387,769,127	100.00
1914	1,094,123,895	100.00	533,432,411	100.00	185,175,740	100.00	375,515,744	100.00
	*Products of Agriculture.**							
1904	61,512,543	9.59	18,791,159	5.43	6,825,965	7.68	35,895,419	17.34
1905	64,637,035	9.03	19,621,041	5.06	7,601,561	8.09	37,414,433	16.01
1906	70,201,720	8.56	21,201,316	4.73	7,879,171	7.52	41,121,233	15.41
1907	77,030,071	8.62	22,021,732	4.57	8,785,323	7.60	46,223,016	15.62
1908	69,665,943	8.74	21,372,569	5.03	8,971,647	7.89	39,321,727	15.19
1909	73,683,720	8.92	19,009,546	4.65	9,569,169	7.92	45,105,005	15.18
1910	78,736,587	8.13	20,814,209	4.42	9,913,080	6.79	48,009,298	13.67
1911	85,566,053	8.85	24,935,632	5.05	13,562,175	8.12	47,068,246	15.35
1912	90,776,489	9.09	26,041,392	5.09	14,918,163	8.68	49,816,934	15.84
1912	89,687,841	9.16	.....	....	.....	.....	.....	.....
1913	106,067,317	9.27	26,973,005	4.67	14,114,467	7.90	64,979,845	16.76
1914	102,199,907	9.34	24,295,110	4.55	14,808,528	8.00	63,096,269	16.80

* Figures following the break cover only railways with annual operating revenues above $100,000. See page 3.

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TABLE 38—Continued. *Products of Animals.**

Year.	United States.		Eastern District.		Southern District.		Western District.	
	Tonnage originating on line.	Per cent of total.	Tonnage originating on line.	Per cent of total.	Tonnage originating on line.	Per cent of total.	Tonnage originating on line.	Per cent of total.
	(tons)		(tons)		(tons)		(tons)	
1904	17,576,078	2.74	7,095,626	2.05	846,256	0.95	9,634,196	4.66
1905	18,155,743	2.54	7,469,356	1.93	854,519	0.91	9,831,868	4.21
1906	19,002,825	2.32	7,457,802	1.66	906,456	0.86	10,638,567	3.99
1907	20,473,486	2.29	7,636,770	1.59	967,517	0.84	11,869,199	4.01
1908	19,635,150	2.46	7,635,961	1.80	939,489	0.83	11,059,700	4.27
1909	20,593,352	2.49	7,610,582	1.86	1,002,340	0.83	11,980,430	4.03
1910	20,294,144	2.10	7,402,683	1.57	1,083,606	0.74	11,807,855	3.36
1911	23,763,262	2.46	8,218,197	1.67	1,802,976	1.08	13,742,089	4.48
1912	24,974,171	2.50	8,894,392	1.74	2,314,127	1.35	13,765,652	4.38
1912	24,798,745	2.53	.....	....	.....	.....	.....	....
1913	26,446,382	2.31	8,926,737	1.54	2,598,745	1.46	14,920,900	3.85
1914	27,138,634	2.48	9,329,572	1.75	3,161,890	1.71	14,647,172	3.90
	*Products of Mines.**							
1904	330,872,195	51.56	201,621,522	58.29	43,743,364	49.24	85,507,309	41.32
1905	383,562,335	53.59	228,077,198	58.78	47,987,220	51.07	107,497,917	45.99
1906	435,450,476	53.09	261,966,505	58.41	53,432,008	50.97	120,051,963	44.99
1907	476,899,638	53.39	282,559,506	58.67	57,737,415	49.95	136,602,717	46.15
1908	444,216,023	55.72	265,747,801	62.58	57,779,823	50.84	120,688,399	46.61
1909	459,560,732	55.60	256,261,843	62.71	63,050,150	52.20	140,248,739	47.22
1910	544,604,373	56.23	291,210,129	61.80	79,201,479	54.24	174,192,765	49.60
1911	539,255,980	55.75	306,754,072	62.13	90,068,704	53.94	142,433,204	46.48
1912	566,538,387	56.75	315,581,446	61.64	97,535,577	56.80	153,421,364	48.77
1912	559,140,768	57.09	.....	.....	.....	.....	.....	.....
1913	650,940,253	56.86	359,230,979	62.11	101,003,003	56.52	190,706,271	49.18
1914	626,075,666	57.22	338,192,206	63.40	106,978,918	57.77	180,904,542	48.18

* Figures following the break cover only railways with annual operating revenues above $100,000. See page 3.

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TABLE 38—Continued. *Products of Forests.**

Year.	United States.		Eastern District.		Southern District.		Western District.	
	Tonnage originating on line	Per cent of total.	Tonnage originating on line.	Per cent of total.	Tonnage originating on line.	Per cent of total.	Tonnage originating on line.	Per cent of total.
	(tons)		(tons)		(tons)		(tons)	
1904	80,383,577	12.53	23,200,603	6.71	19,778,852	22.26	37,404,122	18.07
1905	80,436,863	11.24	24,388,412	6.29	19,072,521	20.30	36,975,930	15.82
1906	92,187,351	11.24	26,246,855	5.85	21,695,641	20.70	44,244,855	16.58
1907	101,617,724	11.38	26,777,103	5.56	25,493,975	22.06	49,346,646	16.67
1908	90,475,081	11.35	22,955,349	5.41	24,279,663	21.36	43,240,069	16.70
1909	97,104,700	11.75	21,553,953	5.28	25,304,631	20.95	50,246,116	16.92
1910	113,010,825	11.67	23,988,412	5.09	30,561,411	20.93	58,461,002	16.64
1911	108,506,272	11.22	23,031,539	4.66	30,495,686	18.26	54,979,047	17.94
1912	100,147,471	10.03	22,964,432	4.48	28,329,316	16.50	48,853,723	15.53
1912	91,358,705	9.33	.....	....	.....	.....	.....	.....
1913	112,079,164	9.79	23,431,387	4.05	30,789,088	17.23	57,858,689	14.92
1914	110,877,781	10.13	21,733,390	4.07	30,133,630	16.27	59,010,761	15.71
			*Manufactures.**					
1904	86,088,583	13.41	59,199,548	17.12	10,261,415	11.55	16,627,620	8.03
1905	97,332,768	13.60	68,555,629	17.67	10,382,738	11.05	18,394,401	7.87
1906	121,458,738	14.81	85,865,077	19.15	12,198,479	11.63	23,395,182	8.77
1907	137,621,443	15.41	95,880,756	19.91	13,336,596	11.54	28,404,091	9.60
1908	104,860,269	13.15	68,605,936	16.16	12,213,459	10.75	24,040,874	9.28
1909	108,677,129	13.15	70,084,904	17.15	13,399,659	11.09	25,192,566	8.48
1910	139,678,391	14.42	90,419,841	19.19	16,302,043	11.16	32,956,507	9.38
1911	135,175,536	13.97	91,853,664	18.60	18,259,594	10.94	25,062,278	8.18
1912	139,948,653	14.02	93,951,237	18.35	18,646,669	10.86	27,350,747	8.69
1912	138,872,614	14.18	.....	.....	.....	.....	.....	....
1913	165,532,035	14.46	110,483,255	19.10	19,641,814	10.99	35,406,966	9.13
1914	149,183,281	13.64	96,876,283	18.16	19,200,365	10.37	33,106,633	8.82

* Figures following the break cover only railways with annual operating revenues above $100,000. See page 3.

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TABLE 38—Continued. *Merchandise.**

Year.	United States.		Eastern District.		Southern District.		Western District.	
	Tonnage originating on line.	Per cent of total.	Tonnage originating on line.	Per cent of total.	Tonnage originating on line.	Per cent of total.	Tonnage originating on line.	Per cent of total.
	(tons)		(tons)		(tons)		(tons)	
1904	30,986,689	4.83	16,413,343	4.75	3,442,496	3.88	11,130,850	5.38
1905	30,921,538	4.32	17,245,254	4.44	3,561,354	3.79	10,114,930	4.33
1906	33,319,615	4.06	17,731,963	3.95	3,696,235	3.53	11,891,417	4.46
1907	34,718,487	3.89	17,553,982	3.64	4,987,225	4.31	12,177,280	4.11
1908	32,222,678	4.04	14,402,311	3.39	5,661,663	4.98	12,158,704	4.69
1909	33,975,628	4.11	13,539,555	3.31	4,806,660	3.98	15,629,413	5.26
1910	35,718,413	3.69	13,780,911	2.92	5,188,786	3.55	16,748,716	4.77
1911	36,519,321	3.77	15,221,958	3.08	7,495,940	4.49	13,801,423	4.50
1912	38,329,467	3.84	16,689,086	3.26	6,938,705	4.04	14,701,676	4.67
1912	38,118,092	3.89	.....	....	.....	.....	.....	....
1913	42,520,369	3.71	17,951,771	3.10	7,312,038	4.09	17,256,560	4.45
1914	41,474,238	3.79	15,932,247	2.99	7,656,244	4.13	17,885,747	4.76
	*Miscellaneous—Other Commodities.**							
1904	34,260,882	5.34	19,552,496	5.65	3,948,109	4.44	10,760,277	5.20
1905	40,617,160	5.68	22,630,680	5.83	4,499,297	4.79	13,487,183	5.77
1906	48,543,902	5.92	28,052,467	6.25	5,019,725	4.79	15,471,710	5.80
1907	44,824,123	5.02	29,171,555	6.06	4,272,119	3.70	11,380,449	3.84
1908	36,140,955	4.54	23,902,631	5.63	3,807,331	3.35	8,430,993	3.26
1909	32,897,504	3.98	20,589,318	5.04	3,660,850	3.03	8,647,336	2.91
1910	36,421,276	3.76	23,597,090	5.01	3,778,254	2.59	9,045,932	2.58
1911	38,447,567	3.98	23,747,948	4.81	5,298,972	3.17	9,400,647	3.07
1912	37,567,887	3.77	27,848,624	5.44	3,034,836	1.77	6,684,427	2.12
1912	37,393,838	3.82	.....	....	.....	.....	.....	....
1913	41,254,783	3.60	31,385,652	5.43	3,229,235	1.81	6,639,896	1.71
1914	37,174,388	3.40	27,073,603	5.08	3,236,165	1.75	6,864,620	1.83

* Figures following the break cover only railways with annual operating revenues above $100,000. See page 8.

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TABLE 39.

REVENUE FREIGHT TRAIN-MILES.*

Year.	United States.		Eastern District.		Southern District.		Western District.	
	Number.	Per cent.	Number.	Per cent	Number.	Per cent.	Number.	Per cent.
1904.....	535,090,971	100.0	229,044,260	42.8	79,857,548	14.9	226,189,163	42.3
1905.....	546,424,405	100.0	238,516,448	43.7	83,818,057	15.3	224,089,900	41.0
1906.....	594,005,825	100.0	257,009,827	43.3	91,536,627	15.4	245,459,371	41.3
1907.....	629,995,723	100.0	268,566,537	42.6	97,060,452	15.4	264,368,734	42.0
1908.....	587,218,454	100.0	249,772,923	42.5	90,769,104	15.5	246,676,427	42.0
1909.....	568,854,608	100.0	238,060,224	41.9	88,364,385	15.5	242,429,999	42.6
1910.....	635,450,681	100.0	265,248,045	41.7	96,367,381	15.2	273,835,255	43.1
1911.....	626,496,025	100.0	279,144,089	44.6	115,999,772	18.5	231,352,164	36.9
1912.....	612,345,112	100.0	271,567,377	44.4	116,612,803	19.0	224,164,842	36.6
1912.....	610,291,829	100.0	270,979,016	44.4	115,988,370	19.0	223,324,443	36.6
1913.....	643,841,292	100.0	284,010,552	44.1	119,540,732	18.6	240,290,008	37.3
1914.....	605,923,249	100.0	262,648,387	43.3	119,779,293	19.7	223,495,569	37.0

TABLE 40.

REVENUE MIXED TRAIN-MILES.*

Year.	United States.		Eastern District.		Southern District.		Western District.	
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
1904.....	31,973,615	.....	.....	....	.....	....	.....	....
1905.....	32,189,996	.....	.....	....	.....	....	.....	....
1906.....	32,833,713	.....	.....	....	.....	....	.....	....
1907.....	32,111,134	.....	.....	....	.....	....	.....	....
1908.....	34,866,036	100.0	6,951,875	19.9	7,115,372	20.4	20,798,789	59.7
1909.....	36,236,916	100.0	6,535,212	18.0	7,697,153	21.3	22,004,551	60.7
1910.....	35,807,207	100.0	6,653,964	18.6	7,982,004	22.3	21,171,239	59.1
1911.....	36,461,466	100.0	6,929,870	19.0	8,222,609	22.6	21,308,987	58.4
1912.....	37,127,992	100.0	6,970,478	18.8	8,118,498	21.9	22,039,016	59.3
1912.....	32,447,189	100.0	6,040,733	18.6	6,671,909	20.6	19,734,547	60.8
1913.....	32,907,378	100.0	6,107,515	18.6	6,385,084	19.4	20,414,779	62.0
1914.....	32,565,313	100.0	6,005,522	18.4	6,217,788	19.1	20,342,003	62.5

* Figures following the break cover only railways with annual operating revenues above $100,000. See page 3.

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TABLE 41.

FREIGHT TRAIN DENSITY.*

(Freight train-miles per mile of line.)

Year.	United States.	Eastern District.	Southern District.	Western District.
1904	2,563	4,124	2,240	1,924
1905	2,546	4,236	2,292	1,841
1906	2,704	4,505	2,430	1,965
1907	2,801	4,647	2,511	2,058
1908	2,565	4,313	2,294	1,876
1909	2,442	4,116	2,173	1,803
1910	2,669	4,572	2,316	1,977
1911	2,573	4,571	2,604	1,678
1912	2,469	4,233	2,448	1,645
1912	2,562	4,360	2,577	1,703
1913	2,656	4,546	2,611	1,791
1914	2,464	4,177	2,578	1,637

TABLE 42.

REVENUE FREIGHT CAR-MILES—ALL CARS.*

Year.	United States.		Eastern District.		Southern District.		Western District.	
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
1904	14,353,650,056	100.0	6,551,593,612	45.6	1,904,151,504	13.3	5,897,904,940	41.1
1905	15,082,070,763	100.0	6,880,698,604	45.6	2,049,034,099	13.6	6,152,338,060	40.8
1906	16,589,958,024	100.0	7,542,136,642	45.5	2,232,511,971	13.4	6,815,309,411	41.1
1907	17,122,259,754	100.0	7,742,063,829	45.2	2,241,013,192	13.1	7,139,182,733	41.7
1908	16,857,003,236	100.0	7,717,714,619	45.8	2,209,971,420	13.1	6,929,317,197	41.1
1909	17,169,413,224	100.0	7,723,478,795	45.0	2,341,824,367	13.6	7,104,110,062	41.4
1910	18,981,573,779	100.0	8,496,839,034	44.8	2,582,694,657	13.6	7,902,040,088	41.6
1911	19,315,156,130	100.0	9,143,129,157	47.3	3,219,128,891	16.7	6,952,898,082	36.0
1912	19,466,402,067	100.0	9,194,305,032	47.2	3,303,828,793	17.0	6,968,268,242	35.8
1912	19,430,455,051	100.0	9,186,913,803	47.3	3,293,721,611	16.9	6,949,819,637	35.8
1913	21,034,670,482	100.0	9,863,978,080	46.9	3,477,619,131	16.5	7,693,073,271	36.6
1914	20,796,894,831	100.0	9,563,511,047	46.0	3,673,076,401	17.7	7,560,307,383	36.3

* Figures following the break cover only railways with annual operating revenues above $100,000. See page 3. Caboose-miles are included in Table 42; beginning with 1908, special car-miles in freight service have been separately tabulated and are not included here.

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TABLE 43.

REVENUE FREIGHT CAR-MILES—LOADED CARS.*

Year.	United States.		Eastern District.		Southern District.		Western District.	
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
1904.....	9,849,576,535	100.0	4,428,914,883	45.0	1,307,219,684	13.3	4,113,441,968	41.7
1905.....	10,278,745,467	100.0	4,611,792,089	44.9	1,389,430,858	13.5	4,277,522,520	41.6
1906.....	11,410,599,327	100.0	5,077,798,229	44.5	1,539,456,847	13.5	4,793,344,251	42.0
1907.....	12,021,325,746	100.0	5,304,694,680	44.1	1,580,286,919	13.2	5,136,344,147	42.7
1908.....	11,128,231,436	100.0	4,963,060,582	44.6	1,446,179,940	13.0	4,718,990,914	42.4
1909.....	11,360,655,079	100.0	4,963,876,962	43.7	1,533,538,356	13.5	4,863,239,761	42.8
1910.....	12,851,294,922	100.0	5,669,740,976	44.1	1,735,560,323	13.5	5,445,993,623	42.4
1911.....	12,859,386,385	100.0	5,978,777,607	46.5	2,110,888,495	16.4	4,769,720,283	37.1
1912.....	13,088,331,845	100.0	6,093,812,851	46.5	2,182,659,980	16.7	4,811,859,014	36.8
1912.....	13,067,910,450	100.0	6,089,450,142	46.6	2,176,725,414	16.7	4,801,734,894	36.7
1913.....	14,271,944,094	100.0	6,603,325,705	46.3	2,334,594,658	16.3	5,334,023,731	37.4
1914.....	13,669,210,232	100.0	6,186,320,086	45.2	2,362,072,296	17.3	5,120,817,850	37.5

TABLE 44.

FREIGHT CAR-MILES PER FREIGHT TRAIN-MILE.*

(Cars per train.)

Year.	United States.	Eastern District.	Southern District.	Western District.
1904.....	25.3	28.6	23.8	26.1
1905.....	26.1	28.8	24.4	27.5
1906.....	26.5	29.3	24.4	27.8
1907.....	25.9	28.8	23.1	27.0
1908.....	27.1	30.1	22.6	25.9
1909.....	28.4	31.6	24.4	26.9
1910.....	28.3	31.2	24.8	26.8
1911.....	29.1	32.0	25.9	27.5
1912.....	30.0	33.0	26.5	28.3
1912.....	30.2	33.2	26.9	28.6
1913.....	31.1	34.0	27.6	29.5
1914.....	32.6	35.6	29.2	31.0

* Figures following the break cover only railways with annual operating revenues above $100,000. See page 3. Beginning with 1908, special car-miles in freight service have been separately tabulated, and are not included in Table 43. With the exception of the entries for the three districts in 1904, 1905, 1906, and 1907, the freight train-mileage on which the averages of Table 44 are based includes mixed train-miles (see Table 40).

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TABLE 45. **LOADED FREIGHT CAR-MILES PER FREIGHT TRAIN-MILE.***

(Loaded cars per train.)

Year.	United States.	Eastern District.	Southern District.	Western District.
1904	17.4	19.3	16.4	18.2
1905	17.8	19.3	16.6	19.1
1906	18.2	19.8	16.8	19.5
1907	18.2	19.8	16.3	19.4
1908	17.9	19.3	14.8	17.6
1909	18.8	20.3	16.0	18.4
1910	19.1	20.9	16.6	18.5
1911	19.4	20.9	17.0	18.9
1912	20.2	21.9	17.5	19.5
1912	20.3	22.0	17.7	19.8
1913	21.1	22.8	18.5	20.5
1914	21.4	23.0	18.7	21.0

TABLE 46. **TONS CARRIED ONE MILE.***

Year.	United States.		Eastern District.		Southern District.		Western District.	
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
1904	174,522,089,577	100	87,009,756,058	49.9	21,737,598,114	12.4	65,774,735,405	37.7
1905	186,463,109,510	100	93,948,925,921	50.4	23,577,646,792	12.6	68,936,536,797	37.0
1906	215,877,551,241	100	107,488,614,742	49.8	27,252,842,492	12.6	81,136,094,007	37.6
1907	236,601,390,103	100	117,961,319,632	49.8	28,815,564,501	12.2	89,824,505,970	38.0
1908	218,381,554,802	100	108,302,123,117	49.6	26,978,599,903	12.3	83,100,831,782	38.1
1909	218,802,986,929	100	106,376,498,931	48.6	28,574,158,775	13.1	83,852,329,223	38.3
1910	255,016,910,451	100	125,024,755,529	49.0	33,840,444,295	13.3	96,151,710,627	37.7
1911	253,783,701,839	100	130,834,171,530	51.6	41,712,302,738	16.4	81,237,227,571	32.0
1912	264,080,745,058	100	134,947,238,083	51.1	44,249,585,878	16.8	84,883,921,097	32.1
1912	263,779,008,254	100	134,856,670,210	51.1	44,172,334,878	16.8	84,750,903,166	32.1
1913	301,398,752,108	100	154,172,856,257	51.2	48,543,394,380	16.1	98,682,501,471	32.7
1914	288,319,890,210	100	144,427,881,290	50.1	50,131,636,290	17.4	93,760,372,630	32.5

* Figures following the break cover only railways with annual operating revenues above $100,000. See page 8. For Table 45 see footnote on page 51 applicable to Table 44.

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TABLE 47.

TON-MILES PER INHABITANT.*

Year.	United States.	Eastern District.	Southern District.	Western District.
1904	2,118	2,539	1,240	2,151
1905	2,220	2,693	1,326	2,201
1906	2,522	3,027	1,512	2,531
1907	2,714	3,265	1,577	2,740
1908	2,460	2,947	1,457	2,479
1909	2,421	2,847	1,523	2,448
1910	2,773	3,292	1,781	2,748
1911	2,702	3,124	2,161	2,482
1912	2,764	3,171	2,263	2,539
1912	2,761	3,169	2,259	2,535
1913	3,102	3,566	2,451	2,892
1914	2,919	3,289	2,500	2,693

TABLE 48.

AVERAGE HAUL PER TON (MILES).*

Year.	Average haul per ton—United States.	Average haul per ton on the individual railway.			
		United States.	Eastern District.	Southern District.	Western District.
1904	244.30	133.23	113.69	159.57	161.07
1905	237.56	130.60	111.22	164.16	156.90
1906	240.89	132.33	110.22	166.77	161.78
1907	242.05	131.71	110.90	164.38	161.15
1908	253.94	143.83	123.43	162.95	169.61
1909	251.10	141.87	123.04	163.79	162.01
1910	249.68	138.31	120.36	164.62	158.79
1911	254.10	142.88	122.68	177.54	171.11
1912	256.87	143.44	121.87	179.40	174.24
1912	261.02	145.15	122.75	183.33	176.87
1913	259.99	146.59	124.11	184.62	179.16
1914	260.19	146.04	123.19	183.83	177.20

* Figures following the break cover only railways with annual operating revenues above $100,000. See page 8.

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TABLE 49.

FREIGHT DENSITY.*

(Ton-miles per mile of line.)

Year.	United States.	Eastern District.	Southern District.	Western District.
1904	829,476	1,552,554	603,169	547,388
1905	861,396	1,660,374	635,430	559,159
1906	982,401	1,868,782	712,660	640,962
1907	1,052,119	2,031,644	737,575	689,235
1908	974,654	1,875,232	673,253	626,382
1909	953,986	1,836,516	692,321	615,629
1910	1,071,086	2,151,593	806,839	682,988
1911	1,053,566	2,073,671	924,069	613,179
1912	1,078,580	2,131,165	952,994	629,131
1912	1,110,811	2,165,738	972,939	638,486
1913	1,245,158	2,473,764	1,063,094	736,959
1914	1,176,923	2,300,588	1,089,013	689,442

TABLE 50.

TON-MILES PER FREIGHT TRAIN-MILE.*

(Tons per train.)

Year.	United States.	Eastern District.	Southern District.	Western District.
1904	307.8	379.9	272.2	290.8
1905	322.3	393.9	281.3	307.6
1906	344.4	418.2	297.7	330.5
1907	357.4	439.2	296.9	339.8
1908	351.8	421.9	275.6	310.7
1909	362.6	434.9	297.5	317.1
1910	380.4	459.8	324.2	325.9
1911	383.1	457.2	337.4	321.7
1912	406.8	484.2	356.4	344.7
1912	410.3	486.8	360.1	348.7
1913	445.4	531.1	386.7	378.6
1914	451.8	537.3	399.6	384.6

* Figures following the break cover only railways with annual operating revenues above $100,000. See page 3. For Table 50 see footnote on page 51 applicable to Table 44.

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TABLE 51.

TON-MILES PER FREIGHT CAR-MILE—ALL CARS.*

(Tons per car.)

Year.	United States.	Eastern District.	Southern District.	Western District.
1904	12.2	13.3	11.4	11.2
1905	12.4	13.6	11.5	11.2
1906	13.0	14.2	12.2	11.9
1907	13.8	15.2	12.9	12.6
1908	13.0	14.0	12.2	12.0
1909	12.7	13.8	12.2	11.8
1910	13.4	14.7	13.1	12.2
1911	13.1	14.3	13.0	11.7
1912	13.6	14.7	13.4	12.2
1912	13.6	14.7	13.4	12.2
1913	14.3	15.6	14.0	12.8
1914	13.9	15.1	13.6	12.4

TABLE 52.

TON-MILES PER LOADED FREIGHT CAR-MILE.*

(Tons per loaded car.)

Year.	United States.	Eastern District.	Southern District.	Western District.
1904	17.7	19.6	16.6	16.0
1905	18.1	20.4	17.0	16.1
1906	18.9	21.2	17.7	16.9
1907	19.7	22.2	18.2	17.5
1908	19.6	21.8	18.7	17.6
1909	19.3	21.4	18.6	17.2
1910	19.8	22.1	19.5	17.7
1911	19.7	21.9	19.8	17.0
1912	20.2	22.1	20.8	17.6
1912	20.2	22.1	20.8	17.7
1913	21.1	23.8	20.8	18.5
1914	21.1	23.3	21.2	18.3

* Figures following the break cover only railways with annual operating revenues above $100,000. See page 3. See footnote on page 51 applicable to Table 43.

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TABLE 53.

TON-MILES PER FREIGHT LOCOMOTIVE.*

Year.	United States.	Eastern District.	Southern District.	Western District.
1904	6,456,846	7,346,315	6,559,324	5,540,791
1905	6,690,700	7,663,045	6,792,753	5,679,398
1906	7,232,563	8,073,959	7,275,185	6,344,209
1907	7,375,585	8,383,889	6,909,166	6,465,916
1908	6,461,907	7,463,450	6,103,756	5,573,870
1909	6,424,796	7,299,060	6,421,159	5,623,522
1910	7,237,569	8,338,875	7,608,014	6,182,992
1911	6,913,259	7,975,324	6,924,884	5,681,495
1912	7,056,034	8,139,354	6,950,754	5,865,487
1912	7,134,323	8,165,176	7,103,001	5,942,488
1913	7,843,663	9,125,898	7,468,059	6,555,542
1914	7,368,713	8,263,553	7,714,505	6,195,404

TABLE 54.

FREIGHT REVENUE PER MILE OF MAIN TRACK.*

Year.	United States.	Eastern District.	Southern District.	Western District.
1904	$6,000	$8,752	$4,778	$4,824
1905	6,147	9,056	4,881	4,911
1906	6,765	9,930	5,360	5,446
1907	7,312	10,712	5,629	5,969
1908	6,515	9,514	5,053	5,351
1909	6,455	9,305	5,106	5,369
1910	7,239	10,747	5,775	5,885
1911	7,033	10,237	5,997	5,525
1912	7,050	10,448	6,099	5,422
1912	7,254	10,672	6,373	5,566
1913	7,989	11,843	6,777	6,186
1914	7,559	11,038	6,814	5,821

* Figures following the break cover only railways with annual operating revenues above $100,000. See page 3. Entries in Table 53 for the United States for 1908, 1909, and 1910 taken from later tabulations of the Interstate Commerce Commission. For Table 54, freight revenue for 1904, 1905, 1906, and 1907 has been adjusted to include certain miscellaneous items.

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TABLE 55.

FREIGHT REVENUE PER FREIGHT TRAIN-MILE.*

Year.	United States.	Eastern District.	Southern District.	Western District.
1904	$2.427	$2.656	$2.204	$2.650
1905	2.497	2.691	2.217	2.803
1906	2.608	2.794	2.303	2.921
1907	2.740	2.943	2.343	3.072
1908	2.653	2.745	2.148	2.771
1909	2.765	2.837	2.272	2.898
1910	2.862	2.969	2.418	2.940
1911	2.895	2.951	2.388	3.083
1912	3.023	3.129	2.489	3.174
1912	3.038	3.143	2.508	3.204
1913	3.243	3.367	2.644	3.396
1914	3.308	3.433	2.710	3.481

TABLE 56.

AVERAGE RECEIPTS PER TON-MILE.*

Year.	United States.	Eastern District.	Southern District.	Western District.
	(Cents)	(Cents)	(Cents)	(Cents)
1904	.780	.690	.797	.893
1905	.766	.672	.778	.891
1906	.748	.656	.763	.866
1907	.759	.659	.778	.884
1908	.754	.650	.772	.884
1909	.763	.652	.759	.905
1910	.753	.645	.739	.898
1911	.757	.646	.709	.960
1912	.744	.647	.700	.921
1912	.741	.646	.696	.919
1913	.729	.634	.685	.898
1914	.733	.639	.679	.905

* Figures following the break cover only railways with annual operating revenues above $100,000. See page 3. For Table 55, see footnotes on pages 51 and 56, applicable to Tables 44 and 54, respectively.

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VIII. PASSENGER TRAFFIC STATISTICS.

TABLE 57.

REVENUE PASSENGER TRAIN-MILES.*

Year.	United States.		Eastern District.		Southern District.		Western District.	
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
1904.	440,464,866	100	203,937,486	46.3	55,414,687	12.6	181,112,693	41.1
1905.	459,827,029	100	210,608,951	45.8	58,431,927	12.7	190,786,151	41.5
1906.	479,037,553	100	218,140,275	45.5	60,627,828	12.7	200,269,450	41.8
1907.	509,328,042	100	227,810,264	44.7	66,472,805	13.1	215,044,973	42.2
1908.	505,945,582	100	223,811,526	44.2	66,081,992	13.1	216,052,064	42.7
1909.	506,011,038	100	220,327,128	43.5	65,440,061	12.9	220,243,849	43.6
1910.	549,015,003	100	230,680,427	42.0	70,990,946	12.9	247,343,630	45.1
1911.	572,929,421	100	251,923,180	44.0	86,179,785	15.0	234,826,456	41.0
1912.	585,853,528	100	252,119,052	43.0	91,644,789	15.7	242,089,687	41.3
1912.	582,752,526	100	250,607,791	43.0	90,575,666	15.5	241,569,069	41.5
1913.	593,061,212	100	252,790,510	42.6	93,175,424	15.7	247,095,278	41.7
1914.	602,388,660	100	254,969,268	42.3	96,931,357	16.1	250,488,035	41.6

TABLE 58.

PASSENGER TRAIN DENSITY.*

(Passenger train-miles per mile of line.)

Year.	United States.	Eastern District.	Southern District.	Western District.
1904	2,110	3,672	1,554	1,540
1905	2,143	3,740	1,598	1,567
1906	2,181	3,824	1,609	1,603
1907	2,265	3,942	1,720	1,674
1908	2,210	3,865	1,670	1,643
1909	2,172	3,809	1,609	1,638
1910	2,306	3,976	1,706	1,786
1911	2,353	4,125	1,935	1,703
1912	2,362	3,929	1,924	1,777
1912	2,446	4,033	2,012	1,846
1913	2,446	4,047	2,035	1,842
1914	2,450	4,055	2,086	1,834

* Figures following the break cover only railways with annual operating revenues above $100,000. See page 8.

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TABLE 59.

REVENUE PASSENGER CAR-MILES.*

(Includes passenger, sleeping, parlor, and observation cars.)

Year.	United States.		Eastern District.		Southern District.		Western District.	
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
1908.....	1,867,984,570	100.0	797,342,014	42.7	237,174,106	12.7	833,468,450	44.6
1909.....	1,881,022,085	100.0	791,956,916	42.1	228,898,695	12.2	860,166,474	45.7
1910.....	2,048,597,509	100.0	844,731,001	41.2	252,960,278	12.4	950,906,230	46.4
1911.....	2,141,382,030	100.0	918,406,641	42.9	312,767,063	14.6	910,208,326	42.5
1912.....	2,202,843,085	100.0	924,575,686	42.0	334,429,047	15.2	943,838,352	42.8
1912.....	2,191,747,753	100.0	920,973,810	42.0	331,034,526	15.1	939,739,417	42.9
1913.....	2,253,797,814	100.0	948,367,536	42.1	341,354,698	15.1	964,075,580	42.8
1914.....	2,295,120,978	100.0	959,288,340	41.8	355,396,410	15.5	980,436,228	42.7

TABLE 60.

PASSENGERS CARRIED ONE MILE.*

Year.	United States.		Eastern District.		Southern District.		Western District.	
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
1904.....	21,923,213,536	100	11,025,906,620	50.3	2,116,098,198	9.7	8,781,208,718	40.0
1905.....	23,800,149,436	100	11,532,082,456	48.4	2,375,557,054	10.0	9,892,509,926	41.6
1906.....	25,167,240,831	100	12,290,570,559	48.8	2,433,552,668	9.7	10,443,117,604	41.5
1907.....	27,718,554,030	100	13,355,148,591	48.2	2,799,169,795	10.1	11,564,235,644	41.7
1908.....	29,082,836,944	100	13,543,677,873	46.6	3,004,998,758	10.3	12,534,160,313	43.1
1909.....	29,109,322,589	100	13,249,295,220	45.5	2,907,063,864	10.0	12,952,963,505	44.5
1910.....	32,338,496,329	100	14,399,925,436	44.5	3,222,945,565	10.0	14,715,625,328	45.5
1911.....	33,201,694,699	100	15,511,763,504	46.7	4,174,646,444	12.6	13,515,284,751	40.7
1912.....	33,132,354,783	100	15,745,175,861	47.5	4,335,404,778	13.1	13,051,774,144	39.4
1912.....	33,039,110,808	100	15,710,180,498	47.5	4,315,071,645	13.1	13,013,858,665	39.4
1913.....	34,575,872,980	100	16,397,128,722	47.4	4,489,604,748	13.0	13,689,139,510	39.6
1914.....	35,258,497,509	100	16,649,408,363	47.2	4,697,747,095	13.3	13,911,342,051	39.5

* Figures following the break cover only railways with annual operating revenues above $100,000. See page 3. Special car-miles in passenger service, which are separately tabulated, are not included in Table 59.

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TABLE 61.

PASSENGER-MILES PER INHABITANT.*

Year.	United States.	Eastern District.	Southern District.	Western District.
1904	266.1	321.7	120.7	287.1
1905	283.4	330.5	133.6	315.9
1906	294.1	346.1	135.0	325.8
1907	318.0	369.7	153.2	352.7
1908	327.6	368.6	162.3	373.9
1909	322.1	354.6	155.0	378.2
1910	351.6	379.1	169.6	420.6
1911	353.5	370.3	216.2	412.9
1912	346.8	369.9	221.7	390.4
1912	345.8	369.1	220.7	389.3
1913	355.9	379.3	226.7	401.2
1914	356.9	379.2	234.3	400.0

TABLE 62.

AVERAGE JOURNEY PER PASSENGER (MILES).*

Year.	United States.	Eastern District.	Southern District.	Western District.
1904	30.64	23.78	39.80	44.21
1905	32.21	24.26	41.08	48.10
1906	31.54	23.85	39.20	47.37
1907	31.72	24.19	40.08	45.89
1908	32.86	24.77	39.21	47.00
1909	32.85	24.68	38.20	46.51
1910	33.50	24.60	38.60	48.59
1911	33.48	25.70	35.42	50.00
1912	33.18	25.64	35.60	49.68
1912	33.38	25.56	36.00	50.09
1913	33.58	25.94	36.05	50.17
1914	33.61	26.17	36.64	48.90

* Figures following the break cover only railways with annual operating revenues above $100,000.
See page 3.

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TABLE 63.

AVERAGE NUMBER OF TRIPS PER INHABITANT.*

Year.	United States.	Eastern District.	Southern District.	Western District.
1904	8.68	13.53	3.03	6.49
1905	8.80	13.62	3.25	6.57
1906	9.32	14.51	3.44	6.88
1907	10.02	15.28	3.82	7.69
1908	10.03	14.88	4.14	7.96
1909	9.86	14.37	4.06	8.13
1910	10.56	15.41	4.39	8.66
1911	10.62	14.54	6.11	8.26
1912	10.51	14.55	6.23	7.86
1912	10.41	14.44	6.13	7.77
1913	10.64	14.72	6.29	8.00
1914	10.66	14.58	6.40	8.17

TABLE 64.

PASSENGER DENSITY.*

(Passenger-miles per mile of line.)

Year.	United States.	Eastern District.	Southern District.	Western District.
1904	104,198	196,740	58,717	73,079
1905	109,949	203,808	64,023	80,240
1906	114,529	213,682	63,637	82,501
1907	123,259	230,015	71,649	88,734
1908	130,073	234,506	74,990	94,478
1909	127,299	228,740	70,435	95,098
1910	138,169	247,813	76,843	103,791
1911	139,191	251,075	92,839	102,555
1912	136,699	257,255	93,645	96,820
1912	140,393	252,299	95,044	98,042
1913	143,067	264,498	98,236	102,227
1914	144,278	266,649	102,360	102,310

* Figures following the break cover only railways with annual operating revenues above $100,000.
See page 3.

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TABLE 65.

PASSENGER-MILES PER PASSENGER TRAIN-MILE.*

(Passengers per train.)

Year.	United States.	Eastern District.	Southern District.	Western District.
1904	46	54	38	48
1905	48	55	41	52
1906	49	56	40	52
1907	51	59	42	54
1908	54	59	41	53
1909	54	58	40	53
1910	56	61	41	55
1911	55	60	44	53
1912	53	61	44	49
1912	54	61	44	50
1913	55	64	45	51
1914	56	64	46	51

TABLE 66.

PASSENGER-MILES PER PASSENGER CAR-MILE.*

(Passengers per car.)

Year.	United States.	Eastern District.	Southern District.	Western District.
1908	15.6	16.9	12.7	15.0
1909	15.5	16.7	12.7	15.1
1910	15.8	17.0	12.7	15.5
1911	15.5	16.9	13.3	14.8
1912	15.0	17.0	13.0	13.8
1912	15.1	17.1	13.0	13.8
1913	15.3	17.3	13.2	14.2
1914	15.4	17.4	13.2	14.2

* Figures following the break cover only railways with annual operating revenues above $100,000. See page 3. With the exception of the entries for the three districts in 1904, 1905, 1906, and 1907, the passenger train-mileage on which the averages of Table 65 are based includes mixed train-miles (see Table 40). For Table 66, see footnote on page 59 applicable to Table 59.

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TABLE 67.

PASSENGER-MILES PER PASSENGER LOCOMOTIVE.*

Year.	United States.	Eastern District.	Southern District.	Western District.
1904	1,948,384	1,896,767	1,802,469	2,058,900
1905	2,048,558	1,941,101	2,025,198	2,196,383
1906	2,054,636	1,983,310	1,914,676	2,184,296
1907	2,163,146	2,132,048	1,952,001	2,260,406
1908	2,171,106	2,136,227	2,016,778	2,331,937
1909	2,152,907	2,108,082	1,913,801	2,349,531
1910	2,321,744	2,266,991	2,135,815	2,537,614
1911	2,268,097	2,280,275	2,053,487	2,321,320
1912	2,271,544	2,316,977	2.019.054	2,302,259
1912	2,295,902	2,326,218	2,080,458	2,314,798
1913	2,341,629	2,398,559	2,097,650	2,354,250
1914	2,364,644	2,438,164	2,176,271	2,340,246

TABLE 68.

PASSENGER REVENUE PER MILE OF MAIN TRACK.*

Year.	United States.	Eastern District.	Southern District.	Western District.
1904	$1,927	$2,940	$1,375	$1,524
1905	1,996	2,966	1,471	1,614
1906	2,096	3,132	1,515	1,701
1907	2,256	3,267	1,692	1,876
1908	2,231	3,227	1,645	1,874
1909	2,168	3,107	1,525	1,871
1910	2,365	3,353	1,658	2,070
1911	2,401	3,350	1,826	2,049
1912	2,365	3,369	1,856	1,965
1912	2,437	3,440	1,945	2,022
1913	2,529	3,569	2,011	2,107
1914	2,504	3,576	2,046	2,046

* Figures following the break cover only railways with annual operating revenues above $100,000. See page 3. Entries in Table 67 for the United States for 1908, 1909, and 1910 taken from later tabulations of the Interstate Commerce Commission.

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TABLE 69.

PASSENGER REVENUE PER PASSENGER TRAIN-MILE.*

Year.	United States.	Eastern District.	Southern District.	Western District.
1904	$1.009	$1.002	$0.914	$1.045
1905	1.028	.998	.958	1.082
1906	1.065	1.038	.983	1.118
1907	1.109	1.058	1.028	1.187
1908	1.121	1.068	1.036	1.201
1909	1.114	1.052	1.001	1.210
1910	1.147	1.092	1.021	1.234
1911	1.148	1.099	1.054	1.235
1912	1.127	1.117	1.033	1.174
1912	1.128	1.120	1.037	1.171
1913	1.174	1.166	1.063	1.223
1914	1.163	1.173	1.058	1.193

TABLE 70.

AVERAGE RECEIPTS PER PASSENGER-MILE.*

Year.	United States.	Eastern District.	Southern District.	Western District.
	(Cents)	(Cents)	(Cents)	(Cents)
1904	2.006	1.828	2.367	2.142
1905	1.962	1.795	2.319	2.071
1906	2.003	1.814	2.403	2.131
1907	2.014	1.782	2.407	2.188
1908	1.937	1.750	2.261	2.062
1909	1.928	1.742	2.234	2.050
1910	1.938	1.742	2.229	2.067
1911	1.974	1.779	2.160	2.139
1912	1.987	1.782	2.176	2.172
1912	1.985	1.786	2.176	2.174
1913	2.008	1.794	2.198	2.203
1914	1.982	1.792	2.176	2.143

* Figures following the break cover only railways with annual operating revenues above $100,000.
See page 3.

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TABLE 71.

PASSENGER SERVICE TRAIN REVENUE PER TRAIN-MILE.*

Year.	United States.	Eastern District.	Southern District.	Western District.
1904	$1.141	$1.208	$1.129	$1.284
1905	1.160	1.205	1.178	1.320
1906	1.203	1.257	1.213	1.358
1907	1.258	1.277	1.248	1.446
1908	1.271	1.267	1.135	1.331
1909	1.270	1.256	1.103	1.341
1910	1.304	1.302	1.120	1.368
1911	1.309	1.308	1.162	1.365
1912	1.291	1.331	1.153	1.305
1912	1.302	1.340	1.175	1.318
1913	1.356	1.397	1.205	1.372
1914	1.345	1.406	1.204	1.340

TABLE 72.

PASSENGER SERVICE TRAIN REVENUE PER MILE OF MAIN TRACK.*

Year.	United States.	Eastern District.	Southern District.	Western District.
1904	$2,349	$3,545	$1,699	$1,872
1905	2,425	3,579	1,808	1,969
1906	2,547	3,791	1,869	2,066
1907	2,737	3,944	2,053	2,286
1908	2,717	3,948	1,997	2,275
1909	2,656	3,822	1,880	2,279
1910	2,873	4,112	2,025	2,493
1911	2,920	4,100	2,216	2,479
1912	2,887	4,129	2,257	2,392
1912	2,975	4,216	2,367	2,462
1913	3,088	4,383	2,442	2,565
1914	3,056	4,391	2,477	2,490

* Figures following the break cover only railways with annual operating revenues above $100,000. See page 3. For Table 71, see footnote on page 62 applicable to Table 65.

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IX. ACCIDENTS.

TABLE 73.

PERSONS KILLED AND INJURED IN TRAIN ACCIDENTS.

Year.	Passengers.	Employees on duty.	Employees not on duty.	Other persons.		Total persons.
				Non-trespassers.	Trespassers.	
Killed.						
1911	142	620	13	11	81	867
1912	139	596	20	13	91	859
1913	181	557	12	9	90	849
1914	85	452	5	9	75	626
Injured.						
1911	6,722	6,601	174	175	141	13,813
1912	9,391	7,098	156	277	151	17,073
1913	8,662	6,905	146	110	174	15,997
1914	7,001	4,823	117	148	178	12,267

TABLE 74.

PERSONS KILLED AND INJURED IN OTHER THAN TRAIN ACCIDENTS.

Year.	Passengers.	Employees on duty.	Employees not on duty.	Other persons.		Total persons.
				Non-trespassers.	Trespassers.	
Killed.						
1911	214	2,251	279	1,143	5,203	9,090
1912	179	2,324	295	1,185	5,343	9,326
1913	222	2,382	350	1,279	5,468	9,701
1914	180	2,071	322	1,298	5,396	9,267
Injured.						
1911	6,711	39,247	780	4,898	5,473	57,109
1912	6,995	42,022	803	4,746	5,536	60,102
1913	7,877	49,714	1,032	5,932	6,136	70,691
1914	8,120	46,018	980	5,827	6,176	67,121

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TABLE 75.

TOTAL PERSONS KILLED AND INJURED IN ACCIDENTS.

(Excludes industrial accidents.)

Year.	Passengers.	Employees on duty.	Employees not on duty.	Other persons.		Total persons.
				Non-trespassers.	Trespassers.	
Killed.						
1911	356	2,871	292	1,154	5,284	9,957
1912	318	2,920	315	1,198	5,434	10,185
1913	403	2,939	362	1,288	5,558	10,550
1914	265	2,523	327	1,307	5,471	9,893
Injured.						
1911	13,433	45,848	954	5,073	5,614	70,922
1912	16,386	49,120	959	5,023	5,687	77,175
1913	16,539	56,619	1,178	6,042	6,310	86,688
1914	15,121	50,841	1,097	5,975	6,354	79,388

TABLE 76.

PERSONS KILLED AND INJURED IN INDUSTRIAL ACCIDENTS.

Year.	Killed.	Injured.
1911	439	79,237
1912	400	92,363
1913	414	113,620
1914	409	113,274

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BUREAU OF RAILWAY ECONOMICS

Established by Railways of the United States
for the Scientific Study of Transportation Problems

FRANK HAIGH DIXON
CHIEF STATISTICIAN

JULIUS H. PARMELEE
STATISTICIAN

Comparative Railway Statistics

United States
and
Foreign Countries
1912

Consecutive No. 83
Miscellaneous Series No. 21
WASHINGTON, D. C.
1915

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BULLETINS OF THE
BUREAU OF RAILWAY ECONOMICS

MONTHLY BULLETINS

The monthly summary of Revenues and Expenses of Steam Roads in the United States has been issued regularly since July, 1910. The following issues are out of print:

Consecutive Number.	Monthly Report Series.	Month of—
7.	5.	October, 1910.
9.	7.	December, 1910.
13.	10.	March, 1911.
19.	13.	June, 1911.
22.	15.	August, 1911.
51.	37.	June, 1913.

Following is the list of bulletins for the last twelve months:

Consecutive Number.	Monthly Report Series.	Month of—
68.	51.	August, 1914.
69.	52.	September, 1914.
70.	53.	October, 1914.
71.	54.	November, 1914.
72.	55.	December, 1914.
74.	56.	January, 1915.
76.	57.	February, 1915.
77.	58.	March, 1915.
78.	59.	April, 1915.
79.	60.	May, 1915.
80.	61.	June, 1915.—Insert with Bulletin—Operating Returns: Fiscal Years Ending June 30, 1914 and 1915.
82.	62.	July, 1915.

Unnumbered Compilations:

Number of Stockholders and Average Amount of Stock per Stockholder: Railways of the United States, June 30, 1914.

Taxes Accrued on Railways in the United States in the Aggregate and per Mile of Line, during the Fiscal Year ended June 30, 1913.

(Continued to page 3 of cover.)

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Comparative Railway Statistics

United States and Foreign Countries

1912

Bureau of Railway Economics
Washington, D. C.
October, 1915

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INTRODUCTION.

The purpose of this bulletin is to present comparative data regarding the railway situation in the United States and in the principal foreign countries. The basic data are drawn in practically all instances from the official railway reports of the several countries and present all the significant items of such reports.

Part I of the bulletin gives consecutively the tabular matter for the 38 countries and states covered by the bulletin, while Part II brings together, side by side, in a series of tables, the significant averages and ratios pertaining to railway operation in the different countries.

Thus the first table in Part I summarizes the railway statistics of the United States for the fiscal years 1912, 1913, and 1914; the second table is a similar summary for Algeria for the year 1911; the third a similar summary for Argentine for 1912-'13, and so on. The first table of Part II, however, is a comparison, for the year 1912, of the average number of miles of railway line per 100 square miles of area in the United States, Algeria, Argentine, Australia, France, Germany, etc. The second table of Part II similarly compares the number of miles of line per 10,000 population in the same countries; the third table shows capital per mile of line, and so on. The averages and ratios of these comparative tables of Part II are from the official railway reports, unless otherwise indicated by foot-note. In the latter case the average or ratio was not shown in the official report, but has been computed by the Bureau of Railway Economics from the basic data of Part I. Each of the comparative tables of Part II covers only the countries for which acceptably comparable information is available.

The 38 countries included in the comparative tables of this bulletin are given below. The combined railway mileage of these countries in 1912 was 606,000 miles, or approximately seven-eighths of the total railway mileage of the world. The remaining eighth comprises largely the railway mileage of insignificant or backward countries, together with the mileage of local, narrow-gauge, or otherwise unimportant railways in the principal countries.

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The 38 countries are as follows:

AMERICA—
Argentine,
Brazil,
Canada,
Chile,
Cuba,
Mexico (National Railways),
United States.

EUROPE—
Austria,
Belgium,
Bulgaria,
Denmark,
France,
Germany,
Holland,
Hungary,
Italy,
Norway,
Portugal,
Roumania,
Russia (including Asiatic Russia, but excluding Finland),
Spain,
Sweden,
Switzerland,
United Kingdom.

ASIA—
China (Government railway only),
India,
Japan,
Russia (included under Russia in Europe),
Siam.

AFRICA—
Algeria and Tunis,
Egypt,
Union of South Africa.

AUSTRALIA—
Australian Commonwealth,
New South Wales,
New Zealand.
Queensland,
South Australia,
Victoria,
Western Australia.

The statistics presented for China cover only the Peking-Mukden Railway, the first important line to be operated in that country. Partly because of the recent disturbances in Mexico, adequate railway statistics are available only for the state system, the National Railways of Mexico, which operates about two-fifths of the total railway mileage of Mexico.

The year 1912 is made the basis of comparison in the bulletin because it is the latest year for which most nearly complete sets of official statistics for the respective countries are available. In the case of several countries later statistics are at hand, and they are included in the basic tables of Part I, but not in the comparative tables of Part II. By the term "year 1912" is meant the fiscal year for each country most nearly coinciding with the calendar year 1912—that is, the fiscal year ending on a date between June 30, 1912, and June 30, 1913. The exact character of the fiscal year is indicated for each country at the top of the statistical table appertaining to it. All foreign units have been transformed into their American equivalents by means of the coefficients promulgated by the United States Bureau of Standards and the Director of the Mint. These coefficients are shown on page 12.

It has been found advisable to omit statistics of railway accidents from the present bulletin. The reason is briefly as follows:

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Of the countries that report accident statistics, a number do not adequately explain what kinds of accidents are represented in their statistics of casualties. Hence there is doubt as to whether the figures for different countries are compiled on a sufficiently approximate common basis to justify bringing them into comparison. Others of the reporting countries give a more or less complete classification of the accidents represented in their reports; but these disclose such variation in the comprehensiveness and character of the accident data that these data would surely be misleading unless accompanied by fuller comment and explanation than a due regard for proportion permits in this bulletin. It is hoped that this subject can be separately presented in a later publication.

The terms used are those commonly employed in railway statistics of the United States. These are in most cases well enough understood, but a few terms may require definition. "Passenger revenue" indicates the receipts from passenger fares only. "Passenger-train revenue" includes not only receipts from passenger fares, but also receipts for carrying mail, express, excess baggage and milk, receipts from parlor and chair cars, and all other revenue received in connection with the operation of passenger trains, or trains running on passenger-train schedule, such as solid mail or express trains. Similarly, "freight revenue" is that received from the transportation of freight. In the United States there is no category, for the freight service, corresponding to "passenger-train revenue." But in certain other countries the statistics show, in addition to revenues from the transportation of freight, some other receipts in connection with the freight service that are included in the aggregate of revenue from that service. In these countries this aggregate of revenue is designated as "freight-train revenue."

Attention is called especially to the fact that the strict comparability of all the items throughout this bulletin is not assured, even by the greatest care in compilation. It would be an impossible task so to tabulate and adjust the railway statistics of a number of countries—differing from each other in so many respects—as to place them on a strictly comparable basis. Every attempt to present a comparison between statistics of different countries encounters practically insuperable obstacles to complete comparability. These spring from numerous differences in the classification of data, in the composition of accounts, and in the organization and character of the railway service. A few examples will illustrate the point.

In most European countries the term "freight," as employed in the statistics of freight tonnage and freight revenue, includes a large part of such traffic as is carried by express companies in the United States. In some cases the data on this traffic could be eliminated, but it is a debatable question whether it is always expedient to do so. A great part of such traffic is carried on fast freight trains along with what Americans designate "package freight."

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It is in most respects a part of the fast freight service, rather than an express service, as that is understood in the United States. Besides the question of expediency, is the impossibility—since both kinds of traffic are carried on the same freight trains—of determining for comparisons on the train-mile basis the freight train-miles, in the American sense of the term, that would correspond to the revised tonnage and revenue statistics obtained by eliminating this sort of express traffic. By leaving this traffic in the tonnage and revenue statistics for freight, the data for each country are at least self-consistent.

Differences in the character of the service affect the comparability of average receipts per passenger-mile and per ton-mile. In the case of the passenger service, practically all countries other than the United States and Canada offer a great variety of accommodations. And in those countries the cheaper accommodations, much inferior to that of the usual "day-coaches" here and in Canada, are far the more extensively used. As a result, the average revenue per passenger-mile is greatly reduced on account of the preponderance of traffic in the second, third, and even fourth classes. No allowance can be made for this difference by any adjustment, although the reader of such comparisons may correct his own judgment in a measure by considering separately the averages for each class of passenger service and comparing with the United States and Canada only the average receipts from those classes that approach comparability with the typical service in these two countries. So far as practicable, the basic tables of Part I show the distribution, according to the several classes, of the number of passengers, the passenger traffic as measured by passenger-miles, and the passenger revenue.

In the case of the freight service the railways of the United States carry freight to a far greater extent in wholesale lots than in any other country except Canada. European countries, including England, cater to frequent, quick delivery of small shipments. The result is a more expensive service and a higher average charge. Furthermore, the average length of haul in the United States is shown in this bulletin (page 76) to be greater than in any other country. A comparison of the average receipts per ton-mile from the freight traffic as a whole in the United States and other countries is thus not a comparison of receipts for quite the same kind of service.

Another example of limited comparability is found in the term "capital." In the United States "capital" is most commonly understood to mean "capitalization"—that is, the outstanding stocks and bonds. Such is the sense in which the term is used also in Canada and the United Kingdom. But in the numerous countries that have a large part, if not most or all, of their railway mileage under government ownership, there is no capitalization of railways as such. The statistics of these countries report the totals expended for the construction and equipment of the railway plant. These sums would appear to be analogous to the term "property investment" employed in railway statistics of the United States. But it is not possible to tell, without intimate knowledge

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of the content of these capital accounts of such foreign railways, whether the American term covers the same items of expense as those included in the totals reported for these other countries. Therefore, the term "capital" as used in these tables may not designate exactly the same thing for all countries.

Statistics of revenues and expenses, and the various averages and ratios based thereon, lack complete comparability by reason of differences in accounting practices. Thus "operating revenues," as employed in American railway statistics, do not include certain items of corporate income, derived from other than transportation or allied operation, that are included in some other countries. For example, the "receipts from all sources of traffic" in the United Kingdom include receipts from "steamboats, canals, harbors, docks, etc.," which in the United States, until the fiscal year 1915, were not included in operating revenues. In Germany certain receipts in the nature of hire of equipment and rent for leased roadway are included in the statement of operating revenues. Such items amount to but a small percentage of the total receipts herein designated "operating revenues," but to that small extent they impair the strict comparability of the revenue statistics for different countries.

Other differences in practice affect the statistics of revenue from specific branches of the service. "Passenger revenue" in the United States includes only revenues from passenger fares. Free baggage up to 150 pounds is allowed on regular passenger tickets. But in most European countries all baggage is subject to a charge in addition to the price of the ticket. Revenue from passenger fares in these countries is thus not strictly comparable with passenger revenue in the United States because the American service is somewhat more inclusive. The difference cannot be adjusted because the baggage revenue in those countries includes not only that from baggage within the 150-pound limit common in the United States, but also the revenue from what would be excess baggage here, which is subject to an additional charge in the United States. Revenue from the passenger-train service, other than passenger fares, includes in the United States, as already indicated, revenue from the express traffic; but in Germany, France, and some other countries this traffic is classed with the freight service, and the revenue from it is included in the amount reported as freight revenue. Hence, neither revenue from the passenger-train service nor freight revenue is strictly comparable as between all countries, and especially as between the United States and most European countries.

Similarly, accounting practice in different countries does not include uniformly the same items in operating expenses. Perhaps the most important departure from American practice is that of the United Kingdom, which includes in "working expenses" the item of taxes, amounting to more than 6 per cent of the total. The English figure includes also, corresponding to the statement of operating revenues, "steamboat, dock, harbor, and canal expenses." These items, with taxes, amount to about 12 per cent of the total.

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Germany also includes in expenses of operation "taxes, municipal expenses, and public charges"; but in this case it is only a little more than 1 per cent of the total of such expenses.

The non-comparability in operating revenues and operating expenses affects, of course, the comparability of net operating revenue and of the operating ratio. Yet these are probably not as much disturbed as are the revenues and expenses, since there are usually compensating items in both revenues and expenses. Thus, while English operating revenues include receipts from steamboats, docks, canals, etc., operating expenses include the expense of operating these branches of the companies' activities. While, in Germany, operating revenue includes rent from leased roadway and hire of equipment, operating expenses include the corresponding outlays. Nevertheless, comparisons of these items should not be drawn too closely.

From these instances of non-comparability, and many others that exist, it may be urged that all comparisons of data for different countries are entirely vitiated. That, however, would be far too drastic a conclusion. If the mere fact of incomplete comparability is destructive of all serviceableness for comparative purposes, then few indeed of comparative statistics, even those that are much valued, can be used. The usefulness of the comparative tables is limited in the last analysis by the degree of non-comparability. In the present case this is not sufficient to destroy the significance and interest of the statistics for comparative purposes. The probable error, although not definitely measurable, does not appear to be sufficient to destroy the usefulness of the data here published. It only contracts somewhat the limits of that usefulness.

It will be of interest to present here a table showing the railway mileage of the 38 countries under consideration, classified according to ownership into state and private. In view of the fact that the official reports of the various countries do not in many instances report the complete mileage in operation, it has been necessary to rely for this information upon the Archiv für Eisenbahnwesen.

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STATE AND PRIVATE MILEAGE: 1912.

Country.	State.	Private.	Total.
United States	.....	249,852	249,852
Algeria and Tunis (1911)	1,160	1,711	2,871
Argentine[a]	2,494	18,145	20,639
Australia	16,898	1,781	18,679
New South Wales	3,832	267	4,099
Queensland	4,266	368	4,634
South Australia[b]	1,939	58	1,997
Victoria	3,622	51	3,673
Western Australia	2,598	832	3,430
Austria	11,965	2,444	14,409
Belgium	2,715	217	2,932
Brazil[a]	6,403	7,445	13,848
Bulgaria	1,200	.....	1,200
Canada	1,732	24,995	26,727
Chile[c]	3,228	1,780	5,008
China[d]	.....	6,123	6,123
Cuba (approximate)	130	2,470	2,600
Denmark	1,217	1,107	2,324
Egypt[a]	2,792	882	3,674
France (1911)	5,545	19,692	25,237
Germany	35,560	2,189	37,749
Holland	1,215	1,089	2,304
Hungary	11,229	2,103	13,332
India[a]	29,317	4,160	33,477
Italy[a]	8,928	1,896	10,824
Japan	5,217	797	6,014
Mexico[a]	7,863	7,977	15,840
New Zealand	2,860	29	2,889
Norway	1,635	282	1,917
Portugal (1910)	636	885	1,521
Roumania[a]	2,168	73	2,241
Russia (1910)	27,858	[e]12,502	40,360
Siam[a]	598	102	700
Spain	.....	9,291	9,291
Sweden	2,865	5,941	8,806
Switzerland[a]	1,701	1,293	2,994
Union of South Africa	7,848	545	8,393
United Kingdom	.....	23,441	23,441

[a] Statistics are from Archiv für Eisenbahnwesen, and do not agree with entries in basic tables.

[b] Statistics are from Statistical Abstract for the several British Self-governing Dominions, and do not agree with entries in basic table, p. 25.

[c] Statistics from Statesman's Year-Book.

[d] Statistics from Archiv für Eisenbahnwesen, which does not report any state mileage in China. Entries in basic table (page 36) covers Peking-Mukden government line only.

[e] Includes 600 miles of miscellaneous roads.

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UNITED STATES EQUIVALENTS OF FOREIGN UNITS OF DISTANCE, WEIGHT, AND VALUE.

(United States Bureau of Standards and United States Director of the Mint.)

Foreign unit.	Equivalent in terms of—
Distance.	English miles.
Kilometer	.62136995
Verst	.66288
Weight.	Short tons (2,000 lbs.)
Long or English ton	1.12
Metric ton	1.10231
Pood	.01806
Value.	Dollars.
Crown (Austria-Hungary)	.203
Crown (Denmark, Norway, Sweden)	.268
Dollar (China)	.399
Dollar (Mexico)	.4985
Franc, Leu (Roumania), Lira (Italy), Peseta (Spain)	.193
Mark (Germany)	.238
Milreis (Brazil)	.546
Milreis (Portugal)	1.080
Peso (Argentine)	.965
Peso (Chile)	.365
Pie (India)	.0016897
Pound (English)	4.8665
Ruble (Russia)	.515
Rupee (India)	.3243
Tical (Siam)	.3708
Yen (Japan)	.4984

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PART I.

BASIC STATISTICAL TABLES.

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NOTE.

Beginning with 1912, the Interstate Commerce Commission has summarized only the returns of railways of Classes I and II, namely, roads with annual operating revenues above $100,000. The tables on pages 15 to 20, dealing with the railways of the United States, give statistics for all roads for 1912, and for roads of Classes I and II, and their non-operating subsidiaries, for 1912, 1913, and 1914.

Certain averages in these tables for the United States have been computed by the Bureau of Railway Economics, as follows: Items Nos. 17, 29, 32, 54, 55, 57, 58, 63, 72, 73, 74, 77, 83, 84, and the subsidiary items under Nos. 39 and 40.

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UNITED STATES.

Year Ended June 30, 1912.

Source: Statistics of Railways in the United States—Interstate Commerce Commission.

	Item.	Number or Amount 1912, All roads.	Number or Amount 1912, Class I and II roads.
1	Area (square miles)[a]	2,973,890	2,973,890
2	Population	95,545,336	95,545,336
3	Miles of line owned	246,816	.....
4	Miles of line operated	249,852	240,406
5	Miles of second track	24,952	24,950
6	Miles of third track	2,512	2,512
7	Miles of fourth or more track	1,903	1,903
8	Total miles of main track	279,219	269,771
9	Miles of yard track and sidings	92,019	91,180
10	Total—miles of all track operated	371,238	360,951
11	Capital stock	$8,622,400,821	$8,493,848,292
12	Funded debt	$11,130,135,443	$11,053,791,217
13	Total capital securities	$19,752,536,264	$19,547,639,509
14	Net capital securities	$15,087,600,650	.....
15	Net capital securities per mile	$63,535	.....
16	Property investment	$16,004,744,966	$15,874,579,626
17	Property investment per mile	.....	$69,049
18	Total operating revenues	$2,842,695,382	$2,826,958,366
19	Total operating expenses	$1,972,415,776	$1,959,094,658
20	Net operating revenue	$870,279,606	$867,863,708
21	Operating ratio—per cent	69.3	69.3
22	Operating revenues per mile	$11.482	$11,849
23	Operating expenses per mile	$7,968	$8,212
24	Net operating revenue per mile	$3,514	$3,637
25	Operating revenues per train-mile	$2.29	$2.30
26	Operating expenses per train-mile	$1.59	$1.59
27	Net operating revenue per train-mile	$0.70	$0.70
28	Taxes	$120,091,534	.....
29	Taxes per mile operated	$484	.....
30	Employees	1,716,380	1,699,941
31	Aggregate compensation of employees	$1,252,347,697	$1,245,034,959
32	Average daily compensation per employee	$2.42	$2.43
33	Locomotives	62,262	61,276
34	Passenger service cars—total	51,490	50,575
	Passenger coaches	33,856	33,089
	Dining, parlor, and sleeping cars	2,505	2,496
	Baggage, express, and postal cars	12,766	12,704
	Other passenger cars	2,363	2,286
35	Freight service cars—total	2,215,549	2,203,423
	Box cars	1,004,030	1,002,582
	Flat cars	150,898	146,153
	Stock cars	76,536	76,423
	Coal cars	855,112	852,759
	Tank cars	7,836	7,795
	Refrigerator cars	30,693	30,686
	Other freight cars	90,444	87,025

[a] Excludes water area.

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UNITED STATES (continued).

	Item.	Number or Amount 1912, All roads.	Number or Amount 1912, Class I and II roads.
36	Company service cars	115,635	114,944
37	Total—all cars	2,382,674	2,368.942
38	Locomotives per mile	.249	.255
39	Passenger service cars per mile	.206	.210
	Passenger coaches	.136	.138
	Dining, parlor, and sleeping cars	.010	.010
	Baggage, express, and postal cars	.051	.053
40	Freight service cars per mile	8.867	9.165
	Box cars	4.019	4.170
	Flat cars	.604	.608
	Stock cars	.306	.318
	Coal cars	3.422	3.547
	Tank cars	.031	.032
	Refrigerator cars	.123	.128
	Other freight cars	.362	.362
41	Company service cars per mile	.463	.478
42	Total cars per mile	9.536	9.853
43	Aggregate tractive power of locomotives (pounds)	1,746,964,128	1,735,466,148
44	Average tractive power per locomotive (pounds)	28,634	28,766
45	Average weight per locomotive (weight on drivers)—tons	63	.....
46	Average weight per locomotive (exclusive of tender)—tons	77	.....
47	Aggregate capacity of freight cars (tons)	82,965,418	.....
48	Average capacity per freight car (tons)	37	.....
49	Passengers carried	1,004,081,346	994,372,283
50	Passengers carried one mile	33,132,354,783	33,039,110,808
51	Passenger density (passenger-miles per mile)	136,699	140,393
52	Average journey per passenger (miles)	33.18	33.38
53	Passengers per train	53	54
54	Passengers per car	15.0	15.1
55	Passenger-miles per inhabitant	346.8	345.8
56	Passenger revenue	$660,373,176	$657,362,319
57	Passenger revenue per mile	$2,704	$2,785
58	Passenger revenue per mile of main track	$2,365	$2,437
59	Average receipts per passenger (cents)	65.7	66.0
60	Average receipts per passenger-mile (cents)	1.987	1.985
61	Passenger train revenue	$806,238,267	$802,651,216
62	Passenger train revenue per mile	$3,301	$3,401
63	Passenger train revenue per mile of main track	$2,887	$2.975
64	Receipts per passenger train-mile	$1.29	$1.30
65	Freight carried (excluding freight received from other roads)—tons	1,031,206,606	1,011,784,287
66	Freight carried (including freight received from other roads)—tons	1,844,977,673	1,818,795,630
67	Freight carried—ton-miles	264,080,745,058	263,779,908,254
68	Freight density (ton-miles per mile)	1,078,580	1,110,811

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UNITED STATES (continued).

	Item.	Number or Amount 1912, All roads.	Number or Amount 1912, Class I and II roads.
69	Average haul per ton (individual railways)—miles	143.44	145.15
70	Average haul per ton (railways as one system)—miles	256.87	261.02
71	Tons per train	406.8	410.3
72	Tons per car	13.6	13.6
73	Tons per loaded car	20.2	20.2
74	Ton-miles per inhabitant	2,764	2,761
75	Freight revenue	$1,968,598,630	$1,956,942,262
76	Freight revenue per mile	$7,962	$8,212
77	Freight revenue per mile of main track	$7,050	$7,254
78	Freight revenue per train-mile	$3.02	$3.04
79	Average receipts per ton	$1.066	$1.075
80	Average receipts per ton-mile (cent)	.744	.741
81	Train-miles (revenue service)—total	1,236,758,715	1,226,887,758
	Freight	612,345,112	610,291,829
	Passenger	585,853,528	582,752,526
	Mixed	37,127,992	32,447,189
	Special	1,432,083	1,396,214
82	Train-miles (non-revenue service)	48,481,295	48,206,204
83	Freight train-miles per mile	2,469	2,562
84	Passenger train-miles per mile	2,362	2,446
85	Locomotive-miles (revenue service)—total	1,666,351,845	1,655,692,468
	Freight	702,570,174	700,473,028
	Passenger	606,029,953	603,048,489
	Mixed	38,213,498	33,539,567
	Special	1,631,478	1,589,820
	Switching	317,906,742	317,041,564
86	Locomotive-miles (non-revenue service)	63,640,173	63,351,159
87	Car-miles (revenue service)—total	22,715,409,640	22,667,282,868
88	Freight—loaded	13,088,331,845	13,067,910,450
89	Freight—empty	5,767,144,368	5,752,997,797
90	Caboose	610,923,254	609,546,804
91	Total—freight	a19,466,402,067	19,430,455,051
92	Passenger	1,476,840,256	1,465,801,742
93	Sleeping, parlor, and observation	726,002,829	725,946,011
94	Other passenger train	1,032,790,495	1,031,773,175
95	Total—passenger	3,235,633,580	3,223,520,928
96	Special	13,373,993	13,306,889
97	Car-miles (non-revenue service)	418,128,132	417,256,570

a Includes 2,600 unclassified.

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UNITED STATES (continued).

Years Ended June 30, 1913 and 1914.

Source: Statistics of Railways in the United States—Interstate Commerce Commission.

	Item.	Number or Amount 1913, Class I and II roads.	Number or Amount 1914, Class I and II roads.
1	Area (square miles)[a]	2,973,890	2,973,890
2	Population	97,163,330	98,781,324
3	Miles of line owned	.....	.....
4	Miles of line operated	244,418	247,398
5	Miles of second track	26,271	27,604
6	Miles of third track	2,589	2.696
7	Miles of fourth or more track	1,964	2,071
8	Total miles of main track	275,242	279,769
9	Miles of yard track and sidings	94,338	97,333
10	Total—miles of all track operated	369,580	377,102
11	Capital stock	$8,610,611,327	$8,680,759,704
12	Funded debt	$11,185,514,385	$11,566,541,553
13	Total capital securities	$19,796,125,712	$20,247,301,257
14	Net capital securities	$15,330,131,446	$15,719,696,925
15	Net capital securities per mile	$65,861	$66,661
16	Property investment	$16,351,639,266	$16,936,697,840
17	Property investment per mile	$70,042	$71,770
18	Total operating revenues	$3,125,135,798	$3,047,019,908
19	Total operating expenses	$2,169,968,924	$2,200,313,159
20	Net operating revenue	$955,166,874	$846,706,749
21	Operating ratio—per cent	69.4	72.2
22	Operating revenues per mile	$12,859	$12,387
23	Operating expenses per mile	$8,929	$8,944
24	Net operating revenue per mile	$3,930	$3,443
25	Operating revenues per train-mile	$2.45	$2.45
26	Operating expenses per train-mile	$1.70	$1.77
27	Net operating revenue per train-mile	$0.75	$0.68
28	Taxes	$127,331,960	$140,531.575
29	Taxes per mile operated	$525	$572
30	Employees	1,815,239	1,695,483
31	Aggregate compensation of employees	$1,373,830,589	$1,373,422.472
32	Average daily compensation per employee	$2.49	$2.53
33	Locomotives	63,378	64,760
34	Passenger service cars—total	51,700	53,466
	Passenger coaches	33,672	34,432
	Dining, parlor, and sleeping cars	2,393	2,479
	Baggage, express, and postal cars	12,943	13,607
	Other passenger cars	2,692	2,948
35	Freight service cars—total	2,273,564	2,325,647
	Box cars	1,032,737	1,043,796
	Flat cars	147,604	146,133
	Stock cars	78,308	82,971
	Coal cars	871,379	899,314
	Tank cars	8,216	8,530
	Refrigerator cars	43,389	48,886
	Other freight cars	91,931	96,017

[a] Excludes water area.

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UNITED STATES (continued).

	Item.	Number or Amount 1913, Class I and II roads.	Number or Amount 1914, Class I and II roads.
36	Company service cars	120,244	124,709
37	Total—all cars	2,445,508	2,503,822
38	Locomotives per mile	.259	.262
39	Passenger service cars per mile	.211	.216
	Passenger coaches	.138	.139
	Dining, parlor, and sleeping cars	.010	.010
	Baggage, express, and postal cars	.053	.055
40	Freight service cars per mile	9.302	9.401
	Box cars	4.225	4.219
	Flat cars	.604	.591
	Stock cars	.320	.335
	Coal cars	3.565	3.635
	Tank cars	.034	.035
	Refrigerator cars	.178	.198
	Other freight cars	.376	.388
41	Company service cars per mile	.492	.504
42	Total cars per mile	10.005	10.121
43	Aggregate tractive power of locomotives (pounds)	1,847,798,393	1,931,953,982
44	Average tractive power per locomotive (pounds)	29,702	30,420
45	Average weight per locomotive (weight on drivers)—tons	65	67
46	Average weight per locomotive (exclusive of tender)—tons	80	83
47	Aggregate capacity of freight cars (tons)	86,978,145	90,977,098
48	Average capacity per freight car (tons)	38	39
49	Passengers carried	1,033,679,680	1,053,138,718
50	Passengers carried one mile	34,575,872,980	35,258,497,509
51	Passenger density (passenger-miles per mile)	143,067	144,278
52	Average journey per passenger (miles)	33.58	33.61
53	Passengers per train	55	56
54	Passengers per car	15.3	15.4
55	Passenger-miles per inhabitant	355.9	356.9
56	Passenger revenue	$695,987,817	$700,403,353
57	Passenger revenue per mile	$2,871	$2,847
58	Passenger revenue per mile of main track	$2,529	$2,504
59	Average receipts per passenger (cents)	67.2	66.4
60	Average receipts per passenger-mile (cents)	2.008	1.982
61	Passenger train revenue	$849,985,506	$855,046,516
62	Passenger train revenue per mile	$3,506	$3,476
63	Passenger train revenue per mile of main track	$3,088	$3,056
64	Receipts per passenger train-mile	$1.36	$1.34
65	Freight carried (excluding freight received from other roads)—tons	1,160,862,756	1,109,271,040
66	Freight carried (including freight received from other roads)—tons	2,058,035,487	1,976,138,155
67	Freight carried—ton-miles	301,398,752,108	288,319,890,210
68	Freight density (ton-miles per mile)	1,245,158	1,176,923

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UNITED STATES (continued).

	Item.	Number or Amount 1913, Class I and II roads.	Number or Amount 1914, Class I and II roads.
69	Average haul per ton (individual railways)—miles	146.59	146.04
70	Average haul per ton (railways as one system)—miles	259.99	260.19
71	Tons per train	445.4	451.8
72	Tons per car	14.3	13.9
73	Tons per loaded car	21.1	21.1
74	Ton-miles per inhabitant	3,102	2,919
75	Freight revenue	$2,198,930,565	$2,114,697,629
76	Freight revenue per mile	$9,048	$8,596
77	Freight revenue per mile of main track	$7,989	$7,559
78	Freight revenue per train-mile	$3.24	$3.31
79	Average receipts per ton	$1.068	$1.069
80	Average receipts per ton-mile (cent)	.729	.733
81	Train-miles (revenue service)—total	1,271,220,178	1,242,080,241
	Freight	643,841,292	605,923,249
	Passenger	593,061,212	602,388,660
	Mixed	32,907,378	32,565,313
	Special	1,410,296	1,203,019
82	Train-miles (non-revenue service)	56,529,278	51,549,272
83	Freight train-miles per mile	2,656	2,464
84	Passenger train-miles per mile	2,446	2,450
85	Locomotive-miles (revenue service)—total	1,736,371,567	1,689,747,878
	Freight	740,728,063	695,276,668
	Passenger	613,567,550	623,090,103
	Mixed	34,008,000	33,767,184
	Special	1,612,978	1,312,782
	Switching	346,343,886	336,187,276
86	Locomotive-miles (non-revenue service)	72,343,178	66,224,447
87	Car-miles (revenue service)—total	a24,368,666,464	24,202,217,481
88	Freight—loaded	14,271,944,094	13,669,210,232
89	Freight—empty	6,120,861,006	6,519,815,602
90	Caboose	641,865,382	607,868,997
91	Total—freight	21,034,670,482	20,796,894,831
92	Passenger	1,500,380,902	1,508,484,797
93	Sleeping, parlor, and observation	753,416,912	786,636,181
94	Other passenger train	1,066,689,961	1,098,162,109
95	Total—passenger	3,320,487,775	3,393,283,087
96	Special	13,440,122	12,039,563
97	Car-miles (non-revenue service)	470,960,793	453,037,735

a Includes 68,085 unclassified.

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ALGERIA AND TUNIS.

Year Ended December 31, 1911.

Source: British Statistical Abstract for the Principal and Other Foreign Countries.

	Item.	Number or Amount. 1911.
1	Area (square miles)	270,432
2	Population	7,493,000
3	Average miles operated	2,871
4	Capital	$158,096,357
5	Capital per mile	$55,108
6	Total operating revenues	$13,438,946
7	Total operating expenses	$8,466,433
8	Net operating revenue	$4,972,513
9	Operating revenues per mile	$4,681
10	Operating expenses per mile	$2,949
11	Net operating revenue per mile	$1,732
12	Operating revenues per train-mile	$1.64
13	Operating expenses per train-mile	$1.03
14	Net operating revenue per train-mile	$0.61
15	Passengers carried	7,825,606
16	Passenger revenue	$4,719,012
17	Average journey per passenger (miles)	34.4
18	Average receipts per passenger-mile (cents)	1.466
19	Freight carried—tons	6,706,661
20	Freight revenue	$8,557,471
21	Average haul per ton (miles)	73.8
22	Average receipts per ton-mile (cents)	1.691
23	Passenger train-miles	5,484,899
24	Freight train-miles	2,724,636
25	Locomotive-miles	10,514,197

ARGENTINE.

Year Ended May 31, 1913.

Source: Ministerio de obras publicas. Memoria, 1912-13.

	Item.	Number or Amount. 1912–13.
1	Area (square miles)	1,153,420
2	Population (1912, estimated)	7,351,000
3	Miles of line operated	19,722
4	Passenger cars	2,720
5	Aggregate capacity of passenger cars (seats)	160,960
6	Total operating revenues	$124,290,269
7	Total operating expenses	$78,431,870
8	Net operating revenue	$45,858,399
9	Passengers carried	73,656,060
10	Freight carried—tons	44,555,493

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COMMONWEALTH OF AUSTRALIA.*

Commonwealth State Railways—Years Ended June 30, 1912 and 1913.

Source: Commonwealth—Statistics of Transport and Communication.

	Item.	Number or Amount. 1912.	Number or Amount. 1913.
1	Area (square miles)	2,974,581	2,974,581
2	Population	a4,455,005	b4,872,059
3	Miles of line operated	16,898	17,775
4	Average miles operated	16,543	17,310
5	Capital	$779,525,065	$833,272,901
6	Capital per mile	$46,130	$46,879
7	Total operating revenues	$92,952,841	$97,106,496
8	Total operating expenses	$60,687,985	$66,157,970
9	Net operating revenue	$32,264,856	$30,948,526
10	Operating ratio—per cent	65.29	68.13
11	Operating revenues per mile	$5,621	$5,610
12	Operating expenses per mile	$3,669	$3,822
13	Net operating revenue per mile	$1,951	$1,788
14	Operating revenues per train-mile	$1.68	$1.67
15	Operating expenses per train-mile	$1.10	$1.14
16	Net operating revenue per train-mile	$0.58	$0.53
17	Employees	77,663	83,494
18	Locomotives	2,898	3,098
19	Passenger cars	4,129	4,349
20	All other cars	62,029	67,192
21	Passengers carried	228,482,786	249,856,206
22	Passenger train revenue	$38,373,112	$40,953,135
23	Freight carried—tons	28,557,225	30,199,938
24	Freight revenue	$52,918,321	$54,275,272
25	Train-miles	55,232,517	58,168,409

* Comprising the states of New South Wales, Queensland, South Australia, Tasmania, Victoria, Western Australia, and the Northern Territory.
a Census of 1911.
b Estimated.

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NEW SOUTH WALES.

State Railways—Years Ended June 30, 1912 and 1914.

Source: Report of the Chief Commissioner of Railways and Tramways.

	Item.	Number or Amount. 1912.	Number or Amount. 1914.
1	Area (square miles)	309,460	309,460
2	Population	a1,646,734	b1,831,716
3	Population per mile of line	468	462
4	Miles of line operated	3,832	3,968
5	Average miles operated	3,799	3,959
6	Capital	$260,430,275	$298,145,485
7	Capital per mile	$67,970	$75,148
8	Total operating revenues	$31,590,753	$37,677,616
9	Total operating expenses	$20,291,315	$26,326,889
10	Net operating revenue	$11,299,438	$11,350,727
11	Operating ratio—per cent	64.23	69.87
12	Operating revenues per mile	$8,315	$9,518
13	Operating expenses per mile	$5,341	$6,651
14	Net operating revenue per mile	$2,974	$2,867
15	Operating revenues per train-mile	$1.71	$1.83
16	Operating expenses per train-mile	$1.10	$1.28
17	Net operating revenue per train-mile	$0.61	$0.55
18	Employees (end of year)	28,961	35,232
19	Employees (average for year)	26,574	33,327
20	Aggregate compensation of employees	$15,238,788	$21,569,306
21	Locomotives	942	1,065
22	Passenger train cars	1,660	1,922
23	Freight cars	16,703	19,103
24	Company's cars	1,085	1,507
25	Aggregate tractive power of locomotives (pounds)	19,859,895	.....
26	Average tractive power per locomotive (pounds)	21,083	.....
27	Aggregate capacity of passenger cars (persons)	68,706	.....
28	Average capacity per passenger car (persons)	53	.....
29	Aggregate capacity of freight and company cars (tons)	214,925	.....
30	Passengers carried—total	70,706,728	86,328,421
	1st class	4,909,917	6,609,133
	2nd class	25,728,155	31,247,111
	Season tickets	23,292,644	24,884,629
	Workmen's weekly tickets	16,776,012	23,587,548
31	Passengers carried one mile	1,091,087,669	1,235,024,536
32	Average journey per passenger (miles)	15.43	14.31
33	Passenger revenue—total	$11,432,766	$13,784,118
	1st class	$3,273,198	$3,968,543
	2nd class	$6,190,008	$7,233,989
	Season tickets	$1,493,105	$1,818,504
	Workmen's weekly tickets	$476,455	$763,082

a Census of 1911.
b Estimated, December 31, 1913.

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NEW SOUTH WALES (continued).

	Item	Number or Amount. 1912.	Number or Amount. 1914.
34	Passenger revenue per mile	$3,009	$3,482
35	Passenger revenue per train-mile	$1.27	$1.37
36	Average receipts per passenger-mile (cents)	1.048	1.116
37	Passenger train revenue	$13,099,358	$15,750,486
38	Passenger train revenue per mile	$3,448	$3,979
39	Passenger train revenue per train-mile	$1.46	$1.56
40	Freight carried—tons	12,219,819	14,835,343
41	Freight carried—ton-miles	a965,458,036	b1,162,459,893
42	Average haul per ton (miles)	81.08	80.45
43	Freight revenue	$18,082,488	$21,402,852
44	Freight revenue per mile	$4,759	$5,407
45	Freight revenue per train-mile	$1.89	$2.04
46	Average receipts per ton-mile (cents)	1.611	1.575
47	Passenger train-miles	8,463,965	9,611,408
48	Freight train-miles	8,515,948	9,529,318
49	Mixed train-miles	1,541,407	1,408,969
50	Total train-miles	18,521,320	20,549,695

QUEENSLAND.

State Railways—Years Ended June 30, 1912 and 1914.

Source: Report of the Commissioner for Railways.

	Item.	Number or Amount. 1912.	Number or Amount. 1914.
1	Area (square miles)	668,224	670,500
2	Population	622,129	660,158
3	Population per mile of line	146	144
4	Miles of line operated	4,266	4,570
5	Average miles operated	4,144	4,507
6	Capital	$135,051,346	$164,709,982
7	Capital per mile	$31,657	$36,041
8	Total operating revenues	$14,759,403	$17,811,497
9	Total operating expenses	$9,330,375	$11,539,742
10	Net operating revenue	$5,429,028	$6,271,755
11	Operating ratio—per cent	63.22	64.79
12	Operating revenues per mile	$3,562	$3,952
13	Operating expenses per mile	$2,252	$2,560
14	Net operating revenue per mile	$1,310	$1,392
15	Operating revenues per train-mile	$1.43	$1.57
16	Operating expenses per train-mile	$0.90	$1.02
17	Net operating revenue per train-mile	$0.53	$0.55
18	Employees	9,217	11,254

a Based on 11,907,561 tons carried.
b Based on 14,448,653 tons carried.

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QUEENSLAND (continued).

	Item.	Number or Amount. 1912.	Number or Amount. 1914.
19	Locomotives	535	608
20	Passenger cars	936	1,143
21	Other passenger train cars	284	263
22	Freight cars	10,972	12,590
23	Passengers carried	17,080,756	22,252,476
24	Passenger revenue	$4,170,678	$4,871,936
25	Passenger revenue per mile	$1,007	$1,081
26	Passenger revenue per train-mile	$1.40	$1.41
27	Passenger train revenue	$5,315,493	$6,327,598
28	Passenger train revenue per mile	$1,283	$1,404
29	Passenger train revenue per train-mile	$1.79	$1.83
30	Freight carried—tons	3,912,974	4,817,579
31	Freight revenue	$9,443,910	$11,483,899
32	Freight revenue per mile	$2,279	$2,548
33	Freight revenue per train-mile	$1.28	$1.45
34	Passenger train-miles	2,969,445	3,449,979
35	Freight train-miles	7,357,792	7,896,355
36	Total train-miles	10,327,237	11,346,334
37	Train density (train-miles per mile)	2,492	2,517

SOUTH AUSTRALIA.

State Railways—Years Ended June 30, 1912 and 1914.

Source: Report of the South Australian Railway Commissioner.

	Item.	Number or Amount. 1912.	Number or Amount. 1914.
1	Area (square miles)	380,070	380,070
2	Population	424,000	438,000
3	Miles of line per 10,000 population	45.7	42.1
4	Population per mile of line	219	237
5	Miles of line operated	1,462	1,845
6	Average miles operated	1,461	1,815
7	Average miles of second track operated	29	54
8	Capital	$64,433,312	$76,404,717
9	Capital per mile	$44,120	$41,409
10	Total operating revenues	$10,173,725	$11,374,232
11	Total operating expenses	$6,297,188	$7,327,805
12	Net operating revenue	$3,876,537	$4,046,427
13	Operating ratio—per cent	61.89	64.42
14	Operating revenues per mile	$6,964	$6,268
15	Operating expenses per mile	$4,312	$4,039
16	Net operating revenue per mile	$2,652	$2,229
17	Operating revenues per train-mile	$1.69	$1.69
18	Operating expenses per train-mile	$1.04	$1.09
19	Net operating revenue per train-mile	$0.64	$0.60

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SOUTH AUSTRALIA (continued).

	Item.	Number or Amount. 1912.	Number or Amount. 1914.
20	Employees	8,569	8,995
21	Locomotives	354	403
22	Passenger cars	509	590
23	Freight cars	7,587	8,603
24	Company cars	246	276
25	Aggregate hauling power of locomotives (tons)	291,334	360,276
26	Aggregate seating capacity of passenger cars	19,059	23,150
27	Aggregate capacity of freight cars (excluding stock cars)—tons	68,212	83,989
28	Aggregate capacity of stock cars (head)	37,621	47,852
29	Passengers carried—total	18,353,054	19,809,533
	1st class	1,648,987	1,816,799
	2nd class	8,512,727	9,422,658
	Season tickets	6,848,480	7,098,360
	Workmen's weekly tickets	1,342,860	1,471,716
30	Passengers carried one mile	213,299,008	236,764,109
31	Average journey per passenger (miles)	11.62	11.95
32	Passenger revenue	$2,866,587	$3,094,933
33	Average receipts per passenger-mile (cents)	1.318	1.277
34	Passenger train revenue	$3,395,722	$3,662,007
35	Passenger train revenue per mile	$2,326	$2,020
36	Passenger train revenue per train-mile	$1.30	$1.24
37	Revenue freight carried—tons	3,115,526	3,475,888
38	Revenue freight carried—ton-miles	374,219,506	450,639,053
39	Average haul per ton (miles)	120.11	129.65
40	Freight revenue	$6,549,720	$7,466,121
41	Freight revenue per mile	$4,487	$4,112
42	Freight revenue per train-mile	$1.92	$1.98
43	Average receipts per ton-mile (cents)	1.756	1.666
44	Passenger train-miles	2,614,167	2,951,533
45	Freight train-miles	3,414,984	3,779,751
46	Total train-miles	6,029,151	6,731,284
47	Locomotive-miles	8,845,605	9,769,902

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VICTORIA.

State Railways—Years Ended June 30, 1912 and 1914.

Source: Report of the Victorian Railways Commissioners.

	Item.	Number or Amount. 1912.	Number or Amount. 1914.
1	Area (square miles)	87,884	87,884
2	Population	1,380,561	a1,412,119
3	Population per mile of line	390	.....
4	Miles of line operated	3,622	3,835
5	Miles of second track	320	322
6	Miles of third track	8	8
7	Miles of fourth track	5	5
8	Miles of fifth track	5	5
9	Miles of sixth track	3	3
10	Total miles of main track	3,963	4,177
11	Miles of sidings	651	710
12	Total—miles of all track operated	4,614	4,887
13	Average miles operated	3,543	3,747
14	Capital	$223,063,683	$241,519,830
15	Capital per mile	$61,586	$62,977
16	Total operating revenues	$25,398,103	$27,062,402
17	Total operating expenses	$16,110,470	$18,262,237
18	Net operating revenue	$9,287,633	$8,800,165
19	Operating ratio—per cent	63.43	67.48
20	Operating revenues per mile	$7,168	$7,222
21	Operating expenses per mile	$4,545	$4,871
22	Net operating revenue per mile	$2,623	$2,351
23	Operating revenues per train-mile	$1.84	$1.80
24	Operating expenses per train-mile	$1.16	$1.215
25	Net operating revenue per train-mile	$0.67	$0.59
26	Employees	22,153	24,859
27	Aggregate compensation of employees	$13,480,633	$16,261,191
28	Locomotives	623	735
29	Passenger cars	1,352	1,460
30	Freight cars	14,926	18,217
31	Passengers carried—total	104,234,732	116,611,448
32	1st class	51,162,849	56,919,604
33	2nd class	53,071,883	59,691,844
34	Passenger revenue—total	$11,227,702	$12,267,595
35	1st class	$5,062,678	$5,578,206
36	2nd class	$6,165,023	$6,689,389
37	Passenger train revenue	$12,772,095	$13,960,553
38	Freight carried—tons	5,933,407	6,514,019
39	Freight revenue	$12,200,228	$12,669,519
40	Passenger train-miles	6,312,734	7,526,382
41	Freight train-miles	4,750,965	4,985,293
42	Mixed train-miles	2,772,676	2,516,974
43	Total train-miles	13,836,375	15,028,649

a Estimated.

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WESTERN AUSTRALIA.

State Railways—Years Ended June 30, 1912 and 1913.

Source: Report on the Working of the Government Railways.

	Item.	Number or Amount. 1912.	Number or Amount. 1913.
1	Area (square miles)	975,876	975,920
2	Population	302,295	314,088
3	Population per mile of line	113	108
4	Miles of line operated	2,598	2,854
5	Miles of second track	106	106
6	Miles of sidings	279	296
7	Total—miles of all track operated	2,983	3,256
8	Average miles operated	2,471	2,783
9	Capital	$64,398,847	$72,574,737
10	Capital per mile	$26,060	$26,080
11	Total operating revenues	$9,171,425	$9,917,212
12	Total operating expenses	$6,540,464	$7,331,869
13	Net operating revenue	$2,630,961	$2,585,343
14	Operating ratio—per cent	71.31	73.93
15	Operating revenues per mile	$3,713	$3,562
16	Operating expenses per mile	$2,647	$2,633
17	Net operating revenue per mile	$1,066	$929
18	Operating revenues per train-mile	$1.75	$1.76
19	Operating expenses per train-mile	$1.25	$1.30
20	Net operating revenue per train-mile	$0.50	$0.46
21	Employees (end of year)	7,562	7,750
22	Employees (average for year)	7,464	7,907
23	Aggregate compensation of employees	$5,751,186	$6,329,574
24	Locomotives	359	386
25	Passenger cars	387	401
26	Freight cars	8,118	9,046
27	Passengers carried—total	16,390,261	17,920,096
	1st class	1,702,712	1,878,820
	2nd class	7,562,719	8,039,656
	Season tickets	4,821,460	5,155,360
	Workers' tickets	2,303,370	2,846,260
28	Passenger revenue—total	$2,588,160	$2,652,335
	1st class	$730,905	$751,052
	2nd class	$1,512,479	$1,518,499
	Season tickets	$263,594	$281,240
	Workers' tickets	$81,183	$101,544
29	Passenger revenue per mile	$1,047	$953
30	Average receipts per passenger (cents)	.....	14.8
31	Passenger train revenue	$3,069,170	$3,144,820
32	Passenger train revenue per mile	$1,242	$1,130
33	Revenue freight carried—tons	2,847,137	3,210,190
34	Non-revenue freight carried—tons	348,935	466,054
35	Total freight carried—tons	3,196,072	3,676,244
36	Freight revenue	$5,616,364	$6,179,355
37	Freight revenue per mile	$2,273	$2,220
38	Passenger train-miles	2,152,661	2,139,491
39	Freight train-miles	2,091,181	2,446,281
40	Mixed train-miles	983,469	1,037,360
41	Total train-miles	5,227,311	5,623,132
42	Locomotive-miles	6,606,174	7,088,103

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AUSTRIA.

Year Ended December 31, 1912.

Source: Österreichische Eisenbahnstatistik.

	Item.	Number or Amount. 1912.
1	Area (square miles)	115,832
2	Population (December 31, 1910)	28,571,934
3	Population per mile of line	2,010
4	Square miles of area per mile of line	8.15
5	Miles of line per 10,000 population	4.98
6	Miles of line per 100 square miles of area	12.2
7	Miles of line owned	14,154
8	Miles of second track	2,252
9	Miles of third track	10
10	Miles of fourth track	5
11	Total miles of main track	16,421
12	Miles of yard track and sidings	5,228
13	Total—miles of all track owned	21,649
14	Miles of line operated	14,409
15	Average miles operated	14,354
16	Capital	$1,724,079,152
17	Capital per mile	$121,327
18	Total operating revenues	$230,373,101
19	Total operating expenses	$171,907,189
20	Net operating revenue	$58,465,912
21	Operating ratio—per cent	74.62
22	Operating revenues per mile	$16,049
23	Operating expenses per mile	$11,976
24	Net operating revenue per mile	$4,073
25	Employees	280,220
26	Employees per mile	19.52
27	Aggregate compensation of employees	$92,439,338
28	Compensation of employees per mile	$6,440
29	Locomotives	7,494
30	Motor cars	209
31	Snow plows	248
32	Passenger cars	14,761
33	Baggage cars	4,366
34	Mail cars	810
35	Freight cars	144,198
36	Locomotives per mile	.51
37	Passenger cars per mile	1.03
38	Baggage and freight cars per mile	10.33
39	Aggregate capacity of freight and baggage cars (tons)	2,075,597
40	Aggregate capacity of freight cars (tons)	2,051,887
41	Aggregate capacity of passenger cars (seats and standing room)	638,662
42	Passengers carried—total	290,850,985
	1st class	1,173,798
	2nd class	17,066,576
	3rd class	269,331,683
	Military	3,278,928

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AUSTRIA (continued).

	Item.	Number or Amount. 1912.
43	Passengers carried per mile	20,442
44	Passengers carried one mile—total	5,170,573,893
	1st class	72,569,303
	2nd class	525,989,867
	3rd class	4,388,484,085
	Military	183,530,638
45	Passenger density (passenger-miles per mile)	363,415
46	Average journey per passenger (miles)	17.78
47	Passenger revenue	$54,886,985
	1st class	$1,951,267
	2nd class	$8,902,578
	3rd class	$42,972,282
	Military	$1,060,858
48	Passenger revenue per mile	$3,858
49	Average receipts per passenger (cents)	18.9
50	Average receipts per passenger-mile (cents)	1.062
	1st class	2.689
	2nd class	1.693
	3rd class	.979
	Military	.578
51	Passenger train revenue	$57,275,583
52	Passenger train revenue per mile	$4,026
53	Baggage carried—tons	380,882
54	Baggage carried—ton-miles	22,617,657
55	Revenue freight carried—tons	164,591,627
56	Non-revenue freight carried—tons	10,906,667
57	Total freight carried—tons	175,498,294
58	Revenue freight carried per mile	11,488
59	Total freight carried per mile	12,249
60	Revenue freight carried—ton-miles	10,785,441,510
61	Non-revenue freight carried—ton-miles	1,031,583,414
62	Total freight carried—ton-miles	11,817,024,924
63	Revenue freight density (ton-miles per mile)	752,767
64	Total freight density (ton-miles per mile)	824,766
65	Average haul per revenue ton (miles)	65.53
66	Freight revenue	$161,003,647
67	Freight revenue per mile	$11,237
68	Average receipts per ton (cents)	97.8
69	Average receipts per ton-mile (cents)	1.494
70	Passenger train-miles	61,402,453
71	Mixed train-miles	9,230,665
72	Freight train-miles	50,527,613
73	Work train-miles	740,577
74	Total train-miles	121,901,308
75	Locomotive-miles	130,440,513
76	Locomotive-miles per locomotive	17,191

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BELGIUM.

State Railways—Year Ended December 31, 1912.

Source: Rapport par M. le Ministre des Chemins de Fer.

	Item.	Number or Amount, 1912.
1	Area (square miles)	11,373
2	Population (1912, estimated)	7,571,000
3	Miles of line owned	2,554
4	Miles of second track owned	1,254
5	Miles of line operated	2,715
6	Miles of second track	1,358
7	Miles of yard track and sidings	2,600
8	Total—miles of all track operated	6,673
9	Average miles operated	2,702
10	Capital	$552,029,621
11	Total operating revenues	$63,939,007
12	Total operating expenses	$44,326,854
13	Net operating revenue	$19,612,153
14	Operating ratio—per cent	69.33
15	Operating revenues per mile	$23,665
16	Operating expenses per mile	$16,406
17	Net operating revenue per mile	$7,259
18	Total operating revenues per train-mile	$1.285
19	Total operating expenses per train-mile	$0.89
20	Net operating revenue per train-mile	$0.39
21	Employees	71,907
22	Locomotives	4,288
23	Motor cars (steam and electric)	16
24	Electric motor cars and trailers	38
25	Passenger cars	7,990
26	Other passenger train cars (baggage, postal, etc.)	2,592
27	Total passenger train cars	10,582
28	Freight cars	85,615
29	Company's service cars (work cars)	2,483
30	Total freight train cars	88,098
31	Total—all cars	98,718
32	Average tractive power per locomotive (pounds)	14,517
33	Average weight per locomotive (pounds)	104,865
34	Average number of places per passenger car	49
35	Average capacity per freight car (tons)	14.14
36	Passengers carried—total	191,814,188
	1st class	1,695,808
	2nd class	19,840,265
	3rd class	168,375,222
	Electric line	1,902,893
37	Passengers carried one mile (excluding electric line)	2,827,950,858
38	Average journey per passenger (miles)	14.89
39	Passenger revenue	$19,851,774
40	Passenger train revenue	$22,125,300
41	Receipts per passenger train-mile	$0.77
42	Average receipts per passenger (cents)	10.35

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BELGIUM (continued).

	Item.	Number or Amount. 1912.
43	Freight carried—tons[a]	72,765,073
44	Average haul per ton (miles)[a]	52.26
45	Freight revenue[a]	$39,016,968
46	Freight train revenue	$41,674,013
47	Receipts per freight train-mile	$1.97
48	Average receipts per ton—cents[a]	53.6
49	Passenger train-miles	28,613,664
50	Freight train-miles	21,140,652
51	Other train-miles (including non-revenue trains)	1,117,474
52	Total train-miles	50,871,790
53	Locomotive-miles	78,099,666

BRAZIL.*

Year Ended December 31, 1911.

Source: Estatisticas das Estradas de Ferro da União.

	Item.	Number or Amount. 1911.
1	Area (square miles)	3,291,422
2	Population (December 31, 1910)	23,070,969
3	Miles of line operated	9,951
4	Total operating revenues	$72,883,580
5	Total operating expenses	$63,209,754
6	Net operating revenue	$9,673,826
7	Employees (average for year)	47,441
8	Locomotives	1,434
9	Passenger cars	1,551
10	Baggage cars	350
11	Freight cars	15,358
12	Other cars	1,348
13	Passengers carried—total	44,696,646
	1st class	14,828,422
	2nd class	29,868,224
14	Passengers carried one mile	706,149,747
15	Passenger revenue	$17,117,867
16	Freight carried—tons	8,950,128
17	Freight carried—ton-miles	716,936,931
18	Freight revenue	$49,568,502
19	Baggage and mail carried—tons	255,768
20	Baggage and mail carried—ton-miles	16,531,335
21	Baggage and mail revenue	$2,300,807
22	Animals carried—head	1,318,340
23	Animal revenue	$1,342,213

[a] Does not cover small package freight, live stock, etc., not shipped by weight.
* Excludes roads operated under concession by individual States, approximately 3,800 miles of line.

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BULGARIA.

State Railways—Year Ended December 31, 1911.

Source: Annuaire Statistique du Royaume de Bulgarie.

	Item.	Number or Amount. 1911.
1	Area (square miles)	37,199
2	Population (1911, estimated)	4,401,000
3	Miles of line operated	1,200
4	Capital	$56,559,713
5	Total operating revenues	$5,341,198
6	Total operating expenses	$3,363,419
7	Net operating revenue	$1,977,779
8	Operating ratio—per cent	62.97
9	Operating revenues per mile	$4,505
10	Operating expenses per mile	$2,837
11	Net operating revenue per mile	$1,668
12	Locomotives	196
13	Special cars	23
14	Passenger cars	275
15	Mail cars	34
16	Baggage cars	110
17	Other cars	20
18	Freight cars	4,486
19	Aggregate capacity of passenger cars (seats)	11,925
	1st class	879
	2nd class	2,128
	3rd class	8,918
20	Passengers carried—total	3,489,372
	1st class	14,982
	2nd class	218,196
	3rd class	3,256,194
21	Passengers carried one mile	145,458,977
22	Average journey per passenger (miles)	41.68
23	Passenger revenue	$2,119,540
24	Passenger train revenue	$2,207,967
25	Freight carried—tons	2,857,283
26	Freight revenue	$2,958,378
27	Baggage carried—ton-miles	820,668
28	Number of trains	39,678
29	Average journey per train (miles)	84.75
30	Total train-miles	3,365,133
31	Locomotive-miles	4,087,832
32	Passenger car-miles	9,189,240
33	Freight car-miles	31,387,685
34	Postal car-miles	1,794,985
35	Sleeping car-miles	1,403,196

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CANADA.

Years Ended June 30, 1912 and 1914.

Source: Railway Statistics of the Dominion of Canada.

	Item.	Number or Amount. 1912.	Number or Amount. 1914.
1	Area (square miles)[a]	3,729,665	3,729,665
2	Population (1913, estimated)	7,758,000	7,758,000
3	Miles of line operated	26,727	30,795
4	Miles of second track	1,752	2,293
5	Miles of yard track and sidings	6,149	7,518
6	Total—miles of all track operated	34,629	40,605
7	Total capital liability—private roads	$1,588,937,526	$1,808,820,761
8	Stock	$770,459,351	$853,110,653
9	Debenture stock	.....	$173,307,470
10	Funded debt	$818,478,175	$782,402,638
11	Capital cost—government roads	$123,036,218	$133,706,048
12	Cash subsidies	$208,072,074	$233,772,640
13	Dominion	$154,075,235	$178,834,529
14	Provinces[b]	$35,945,515	$37,023,275
15	Municipalities[c]	$18,051,324	$17,914,836
16	Total operating revenues[d]	$219,403,753	$243,083,539
17	Total operating expenses[d]	$150,726,540	$178,975,259
18	Net operating revenue[d]	$68,677,213	$64,108,280
19	Operating ratio—per cent	68.7	73.6
20	Taxes	$2,186,988	$2,786,332
21	Operating revenues per mile[d]	$8,209	$7,894
22	Operating expenses per mile[d]	$5,639	$5,812
23	Net operating revenue per mile[d]	$2,570	$2,082
24	Operating revenues per train-mile[d]	$2.17	$2.25
25	Operating expenses per train-mile[d]	$1.49	$1.66
26	Employees	155,901	159,142
27	Employees per mile	5.83	5.17
28	Aggregate compensation of employees	$94,237,623	$111,762,972
29	Locomotives	4,484	5,447
30	Passenger train cars	4,946	6,002
31	Freight cars	140,918	204,190
32	Company's service cars	10,466	16,353
33	Locomotives per mile	.168	.176
34	Passenger train cars per mile	.185	.195
35	Freight cars per mile	5.273	6.636
36	Aggregate capacity of freight cars (tons)	4,362,275	6,772,910
37	Passengers carried	41,124,181	46,702,280
38	Passengers carried one mile	2,910,251,636	3,089,031,194
39	Passenger density (passenger-miles per mile)	108,888	100,309
40	Average journey per passenger (miles)	71	66
41	Average passengers per train	62	59
42	Average passengers per car	.....	14
43	Passenger revenue	$56,543,664	$62,012,296
44	Average receipts per passenger	$1.375	$1.328
45	Average receipts per passenger-mile (cents)	1.943	2.007
46	Passenger train revenue	$65,048,187	$72,564,203
47	Receipts per passenger train-mile	$1.39	$1.39

a Includes water area.
b Includes subscriptions to shares amounting to $300,000 for both years.
c Includes subscriptions to shares amounting to $2,839,500 for both years.
d Does not cover outside operations.

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CANADA (continued).

	Item.	Number or Amount. 1912.	Number or Amount. 1914.
48	Freight carried—tons	89,444,331	101,393,989
49	Freight carried—ton-miles	19,558,190,527	22,063,294,685
50	Freight density (ton-miles per mile)	731,776	716,359
51	Average haul per ton (miles)	218	217
52	Average tons per train	325	353
53	Average tons per loaded car	17.87	19.18
54	Freight revenue	$148,030,269	$163,663,744
55	Average receipts per ton	$1.655	$1.614
56	Average receipts per ton-mile (cent)	.757	.742
57	Freight train revenue (including switching charges, etc.)	$149,961,140	$165,753,730
58	Freight train revenue per mile	$5,611	$5,382
59	Receipts per freight train-mile (including mixed)	$2.49	$2.62
60	Passenger train-miles	40,440,393	45,219,048
61	Freight train-miles	53,652,141	55,343,193
62	Mixed train-miles	6,473,882	7,126,841
63	Special train-miles	363,855	206,190
64	Total revenue train-miles	100,930,271	107,895,272
65	Non-revenue train-miles	4,328,812	4,911,928
66	Passenger train car-miles	.....	221,828,645
67	Freight car-miles—total	1,469,386,162	1,618,549,602
68	Loaded	1,102,719,543	1,147,533,071
69	Empty	310,974,528	413,463,359
70	Caboose	55,692,091	57,553,172

CHILE.

Year 1913.

Source: Chile Economico.

	Item.	Number or Amount. 1913.
1	Area (square miles)	292,419
2	Population (1912, estimated)	3,505,000
3	Miles of line	5,020
4	Capital	$242,292,212
5	Employees	31,323
6	Locomotives	1,452
7	Passenger cars	986
8	Freight cars	18,001
9	Total operating revenues	$28,773,601
10	Total operating expenses	$25,564,280
11	Net operating revenue	$3,209,321
12	Passengers carried	14,926,424
13	Freight carried—tons	22,719,354

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CHINA.

Government Railway: Peking-Mukden Line—Year Ended December 31, 1912.

Source: Report of Chinese Government Railways—Peking-Mukden Line.

	Item.	Number or Amount. 1912.
1	Miles of line operated	606
2	Miles of sidings	159
3	Miles of all tracks operated	765
4	Capital	$19,938,657
5	Total operating revenues	$5,260,272
6	Total operating expenses	$1,524,442
7	Net operating revenue	$3,735,830
8	Operating ratio—per cent	28.9
9	Locomotives	123
10	Passenger cars	302
11	Freight cars	2,974
12	Company cars	9
13	Aggregate capacity of freight cars—tons	67,481
14	Passengers carried	3,495,707
15	Passengers carried one mile	217,554,996
16	Passenger revenue	$2,097,779
17	Freight carried—tons	3,864,440
18	Freight carried—ton-miles	335,349,832
19	Freight revenue	$2,733,291
20	Revenue train-miles	2,273,243
21	Non-revenue train-miles	83,862

CUBA.

Year Ended June 30, 1911.

Source: Comision de Ferrocarriles, Memoria sobre los ferrocarriles.

	Item.	Number or Amount. 1911.
1	Area (square miles)	45,881
2	Population (1913, estimated)	2,500,000
3	Miles of line	2,580
4	Total operating revenues	$14,728,366
5	Total operating expenses	$8,849,984
6	Net operating revenue	$5,878,382
7	Locomotives	447
8	Passenger cars	476
9	Freight cars	11,698
10	Company cars	300
11	Passengers carried	8,710,457
12	Passengers carried one mile	160,518,481
13	Passenger revenue	$4,604,150
14	Passenger train revenue	$5,281,369
15	Freight carried—tons	10,613,288
16	Freight carried—ton-miles	279,037,165
7	Freight revenue	$8,215,512
	Freight train revenue	$8,220,859

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DENMARK.

State Railways—Years Ended March 31, 1913 and 1914.

Source: Beretning om Driften de Danske Statsbaner.

	Item.	Number or Amount. 1912-13.	Number or Amount. 1913-14.
1	Area (square miles)	15,046	15,046
2	Population (1912, estimated)	2,800,000	2,800,000
3	Miles of line operated	1,217	1,243
4	Miles of second track	160	160
5	Average miles operated	1,213	1,219
6	Capital	$75,258,132	$76,319,972
7	Total operating revenues	$14,725,420	$15,120,553
8	Total operating expenses	$12,360,788	$12,790,269
9	Net operating revenue	$2,364,632	$2,330,284
10	Operating revenues per mile	$12,141	$12,401
11	Operating expenses per mile	$10,192	$10,490
12	Net operating revenue per mile	$1,949	$1,911
13	Operating revenues per train-mile	$1.69	$1.69
14	Operating expenses per train-mile	$1.42	$1.43
15	Net operating revenue per train-mile	$0.27	$0.26
16	Employees	13,209	13,198
17	Locomotives	622	629
18	Snow plows	64	64
19	Passenger cars	1,558	1,606
20	Mail and baggage cars	427	444
21	Freight cars	9,351	9,664
22	Other cars	63	60
23	Total number of cars	11,399	11,774
24	Aggregate capacity of passenger cars (places)	72,393	75,516
25	Passengers carried—total	22,803,161	23,690,045
	1st class	35,250	31,458
	2nd class	2,024,874	2,036,012
	3rd class	20,743,037	21,622,575
26	Passengers carried per mile	18,800	19,430
27	Passengers carried one mile	491,615,542	497,104,118
28	Passenger density (passenger-miles per mile)	405,338	407,712
29	Average journey per passenger (miles)	21.56	21.00
30	Average passengers per train	53.2	52.4
31	Average passengers per car	12.6	13.1
32	Passenger revenue—total	$6,268,892	$6,385,303
	1st class	$92,263	$84,582
	2nd class	$1,302,460	$1,286,371
	3rd class	$4,874,169	$5,014,350
33	Passenger revenue per mile	$5,169	$5,237
34	Average receipts per passenger (cents)	27.5	27.0
35	Average receipts per passenger-mile (cents)	1.294	1.294
36	Passenger train revenue	$6,444,773	$6,523,591
37	Revenue freight carried—tons*	6,657,389	6,933,254
38	Revenue freight carried per mile—tons*	5,489	5,686
39	Revenue freight carried—ton-miles*	356,458,537	369,023,565
40	Freight density (ton-miles per mile)*	293,900	302,663

* All freight statistics cover baggage traffic.

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DENMARK (continued).

	Item.	Number or Amount. 1912-13.	Number or Amount. 1913-14.
41	Average haul per ton (miles)*	53.54	53.23
42	Non-revenue freight carried—tons	271,728	263,799
43	Non-revenue freight carried—ton-miles	14,549,266	14,028,032
44	Freight revenue	$7,597,064	$7,855,222
45	Freight revenue per mile	$6,264	$6,443
46	Average receipts per ton	$1.14	$1.13
47	Average receipts per ton-mile (cents)	2.113	2.113
48	Average tons per train	37.7	37.8
49	Average tons per car	3.86	3.98
50	Mail revenue	$409,869	$455,079
51	Receipts per mail car-mile (cents)	12.7	15.4
52	Freight and passenger train-miles	8,680,775	8,965,387
53	Motor train-miles	515,947	299,874
54	Work train-miles	110,688	104,043
55	Total train-miles	9,307,410	9,369,304
56	Train density (train-miles per mile)	7,157	7,353
57	Locomotive-miles	9,369,302	9,438,798
58	Passenger car-miles	36,633,850	35,961,470
59	Postal car-miles	3,192,675	2,965,679
60	Baggage and freight car-miles	84,717,281	85,316,560
61	Total car-miles	124,543,806	124,243,709
62	Car-miles per mile	102,687	101,902
63	Average cars per train	14.3	13.9
64	Average receipts per passenger car-mile (cents)	17.1	17.8
65	Average receipts per freight car-mile (cents).	9.0	9.2

EGYPT.

State Railways—Year Ended December 31 ,1912.

Source: British Statistical Abstract for the Principal and other Foreign Countries.

	Item.	Number or amount. 1912.
1	Area (square miles)	12,023
2	Population (estimated)	12,154,000
3	Miles of line	1,486
4	Total operating revenues	$19,357,831
5	Total operating expenses	$11,323,627
6	Net operating revenue	$8,034,204
7	Operating revenues per mile	$13,024
8	Operating expenses per mile	$7,619
9	Net operating revenue per mile	$5,405
10	Operating revenues per train-mile	$1.16
11	Operating expenses per train-mile	$0.68
12	Net operating revenue per train-mile	$0.48
13	Passengers carried	28,782,736
14	Passenger revenue	$9,003,091
15	Freight carried—tons	5,246,128
16	Freight revenue	$10,051,072
17	Passenger and freight train-miles	10,408,268
18	Locomotive-miles	14,037,500

* All freight statistics cover baggage traffic.

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FRANCE.

Year Ended December 31, 1911.

Source: Statistique des Chemins de Fer d'Intérêt Général.

	Item.	Number or Amount. 1911.
1	Area (square miles)	207,129
2	Population	39,601,509
3	Miles of line	25,237
4	Miles of second track	11,077
5	Total—miles of main track	36,313
6	Miles of line per 100 square miles of area	12.18
7	Miles of line per 10,000 population	6.37
8	Average miles operated	25,249
9	Capital	$3,720,673,020
10	Capital per mile	$148,436
11	Total operating revenues	$366,656,433
12	Total operating expenses	$229,361,949
13	Net operating revenue	$137,294,484
14	Operating ratio—per cent	62.6
15	Taxes imposed on the railways	$37,972,062
16	Loss from rate reductions on government business	$23,321,552
17	Total—taxes and reductions	$61,293,614
18	Operating revenues per mile	$14,521
19	Operating expenses per mile	$9,084
20	Net operating revenue per mile	$5,437
21	Taxes per mile	$1,504
22	Loss from reductions per mile	$923
23	Total—taxes and reductions per mile	$2,427
24	Operating revenues per train-mile	$1.48
25	Operating expenses per train-mile	$0.92
26	Net operating revenue per train-mile	$0.56
27	Employees	349,721
28	Locomotives	13,434
29	Passenger cars	30,764
30	Baggage and other passenger train cars	20,380
31	Freight cars	340,048
32	Total number of cars (including work cars)	391,192
33	Locomotives per mile	.53
34	Passenger cars per mile	1.22
35	Baggage and other passenger train cars per mile	.81
36	Freight cars per mile	13.45
37	Total cars per mile	15.48
38	Average capacity per freight car (tons)	13.9
39	Average seating capacity per passenger car:	
	1st class	30.4
	2nd class	49.6
	3rd class	56.7
	Mixed	45.4
40	Passengers carried—total	511,096,490
	1st class	20,705,800
	2nd class	100,490,441
	3rd class	389,900,249

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FRANCE (continued).

	Item.	Number or Amount. 1911.
41	Passengers carried one mile—total	10,923,644,061
	1st class	844,691,640
	2nd class	2,181,077,802
	3rd class	7,897,874,619
42	Passenger density (passenger-miles per mile)	432,630
43	Average journey per passenger (miles)	21.4
	1st class	40.8
	2nd class	21.7
	3rd class	20.3
44	Passenger revenue—total	$118,857,521
	1st class	$17,852,894
	2nd class	$28,594,963
	3rd class	$70,897,189
	Miscellaneous	$1,512,476
45	Passenger revenue per mile	$4,707
46	Receipts per passenger train-mile	$0.75
47	Average receipts per passenger-mile (cents)	1.075
	1st class	2.128
	2nd class	1.311
	3rd class	.898
48	Passenger train revenue	$162,383,599
49	Passenger train revenue per mile	$6,431
50	Receipts per passenger train-mile	$1.02
51	Freight carried—tons	203,525,311
52	Freight carried—ton-miles	15,950,936,206
53	Freight density (ton-miles per mile)	631,736
54	Average haul per ton (miles)	78.4
55	Freight revenue	$188,348,323
56	Freight revenue per mile	$7,459
57	Receipts per freight train-mile	$1.64
58	Average receipts per ton-mile (cents)	1.181
59	Freight train revenue	$198,292,706
60	Freight train revenue per mile	$7,853
61	Freight train revenue per train-mile	$1.73
62	Tons per train	227
63	Passenger train-miles	133,967,761
64	Passenger service train-miles	158,930,952
65	Freight train-miles	87,603,624
66	Work train-miles	1,988,222
67	Total freight service train-miles	89,591,845
68	Mixed train-miles	24,963,191
69	Total train-miles	248,522,798
70	Locomotive-miles	307,982,269
71	Passenger car-miles	1,005,412,504
72	Other passenger car-miles	552,250,219
73	Freight car-miles (including work car-miles)	2,978,384,375
74	Total car-miles	4,536,047,098
75	Passenger cars per train	10.2
76	Freight cars per train	34.5

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GERMANY.

Standard Gauge Railways—Years Ended December 31, 1912 and 1913, for Saxon, Bavarian, and Various Other Systems; Years Ended March 31, 1913 and 1914, for Prussian-Hessian and Various Other Systems.

Source: Statistik der im Betriebe befindlichen Eisenbahnen Deutschlands.

	Item.	Number or Amount. 1912.	Number or Amount. 1913.
1	Area (square miles)	208,825	208,825
2	Population	66,145,982	66,977,826
3	Miles of line operated	37,749	38,154
4	Miles of second track	14,956	15,216
5	Miles of third track	256	289
6	Miles of fourth track	206	246
7	Miles of fifth track	3	3
8	Total—miles of main track operated	53,170	53,908
9	Average miles of line operated	37,565	37,978
10	Average miles operated—main track	52,740	53,497
11	Average miles operated—yard track and sidings	23,943	24,885
12	Average miles operated—all tracks	76,683	78,382
13	Capital	$4,392,651,229	$4,580,404,042
14	Capital per mile	$116,365	$120,049
15	Total operating revenues	$827,419,956	$846,351,025
16	Total operating expenses	$558,230,395	$592,716,555
17	Net operating revenue	$269,189,561	$253,634,470
18	Operating ratio—per cent	67.47	70.03
19	Operating revenues per mile	$22,026	$22,285
20	Operating expenses per mile	$14,860	$15,607
21	Net operating revenue per mile	$7,166	$6,678
22	Employees (average for year)	743,944	786,466
23	Aggregate compensation of employees	$300,723,513	$321,639,536
24	Locomotives	28,366	29,520
25	Motor cars (Triebwagen)	422	470
26	Passenger cars	62,230	65,186
27	Mail cars	2,717	2,804
28	Baggage cars	16,879	18,108
29	Freight cars	631,225	671,096
30	Aggregate capacity of freight cars (tons)	9,926,277	10,673,315
31	Aggregate capacity of passenger cars (seats and standing room)	3,106,247	3,302,092
32	Locomotives per mile	.75	.77
33	Average weight per locomotive (including tenders)—tons	55.95	61.28
34	Passengers carried—total	1,743,111,677	1,797,188,599
	1st class	2,493,016	2,265,602
	2nd class	131,279,154	132,051,842
	3rd class	731,394,828	760,413,947
	4th class	857,854,481	881,290,127
	Military	20,090,198	21,167,081

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GERMANY (continued).

	Item.	Number or Amount. 1912.	Number or Amount. 1913.
35	Passengers carried one mile—total	24,801,193,777	25,592,777,187
	1st class	225,271,749	226,969,804
	2nd class	2,399,822,145	2,424,065,146
	3rd class	10,033,277,780	10,558,767,648
	4th class	11,129,246,126	11,289,394,621
	Military	1,013,575,978	1,093,579,968
36	Passenger density (passenger-miles per mile)	678,385	693,317
37	Average journey per passenger (miles)	14.23	14.24
	1st class	90.36	100.18
	2nd class	18.28	18.36
	3rd class	13.72	13.89
	4th class	12.97	12.81
	Military	50.45	51.67
38	Passenger revenue—total	$224,719,558	$232,242,239
	1st class	$6,576,058	$6,572,163
	2nd class	$37,397,714	$38,111,207
	3rd class	$98,248,408	$103,494,847
	4th class	$78,568,375	$79,817,348
	Military	$3,929,003	$4,246,674
39	Passenger revenue per mile	$6,147	$6,292
40	Average receipts per passenger-mile (cents)	.908	.908
	1st class	2.919	2.896
	2nd class	1.559	1.570
	3rd class	.981	.981
	4th class	.705	.709
	Military	.387	.387
41	Passenger train revenue	$234,314,590	$242,156,590
42	Passenger train revenue per mile	$6,409	$6,560
43	Revenue freight carried—tons	675,038,911	681,614,550
44	Non-revenue freight carried—tons	60,981,586	64,237,656
45	Total freight carried—tons	736,020,497	745,852,206
46	Revenue freight—ton-miles	41,745,318,353	42,290,984,619
47	Non-revenue freight—ton-miles	3,475,274,616	3,952,999,300
48	Total freight—ton-miles	45,220,592,969	46,243,983,919
49	Revenue freight density (ton-miles per mile)	1,117,376	1,119,983
50	Total freight density (ton-miles per mile)	1,210,508	1,224,670
51	Average haul per revenue ton (miles)	61.84	62.04
52	Average haul per ton, all freight (miles)	61.44	62.00
53	Freight revenue	$519,227,398	$526,743,807
54	Freight revenue per mile	$13,898	$13,950
55	Average receipts per ton-mile (cents)	1.244	1.244
56	Freight train revenue[a]	$536,033,315	$544,106,753
57	Freight train revenue per mile[a]	$14,348	$14,409
58	Fast train-miles (Schnellzugen)	45,715,894	49,210,927
59	Express train-miles (Eilzugen)	24,225,532	23,914,251
60	Ordinary passenger train-miles	224,166,892	230,785,285
61	Total passenger train-miles	294,108,318	303,910,463
62	Freight train-miles	173,728,104	176,464,281
63	Work and other train-miles	6,541,019	7,083,096
64	Total train-miles	474,377,441	487,457,840
65	Locomotive-miles	751,203,082	772,127,348
66	Locomotive-miles per mile	19,879	20,331

a Includes mail revenue.

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HOLLAND.

Year Ended December 31, 1912.

Source: Statistische Nachrichten von den Eisenbahnen des Vereins Deutscher Eisenbahnverwaltungen.

	Item.	Number or Amount. 1912.
1	Area (square miles)[a]	12,587
2	Population (estimated)	6,114,000
3	Miles of line owned	2,032
4	Miles of additional main track	988
5	Miles of yard and other track	1,208
6	Total—miles of all track owned	4,228
7	Miles of line operated	2,304
8	Average miles operated	2,288
9	Total operating revenues	$30,749,669
10	Total operating expenses	$21,351,976
11	Net operating revenue	$9,397,693
12	Employees (average for year)	36,351
13	Aggregate compensation of employees	$12,158,600
14	Locomotives	1,220
15	Motor cars (Triebwagen)	21
16	Passenger cars	2,990
17	Baggage cars	1,191
18	Mail cars	147
19	Freight cars	21,781
20	Aggregate seating capacity of passenger cars—total	156,972
	1st class	17,805
	2nd class	41,544
	3rd class	97,203
	4th class	420
21	Aggregate carrying capacity of freight cars (tons)	288,954
22	Passengers carried—total	81,800,886
	1st class	3,393,329
	2nd class	20,044,090
	3rd class	56,698,675
	4th class	291,475
	Military	1,373,317
23	Passengers carried one mile—total	1,334,008,365
	1st class	78,431,861
	2nd class	358,302,816
	3rd class	858,084,957
	4th class	3,114,575
	Military	36,074,157
24	Passenger revenue—total	$13,609,643
	1st class	$1,419,922
	2nd class	$4,632,485
	3rd class	$7,206,218
	4th class	$22,982
	Military	$328,037
25	Revenue freight carried—tons	21,027,799
26	Non-revenue freight carried—tons	643,538
27	Total freight carried—tons	21,671,337
28	Revenue freight carried—ton-miles	1,161,255,409
29	Non-revenue freight carried—ton-miles	34,725,950

[a] Excludes water area.

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HOLLAND (continued).

	Item.	Number or Amount. 1912.
30	Total freight carried—ton-miles	1,195,981,359
31	Freight revenue	$14,399,446
32	Baggage carried—ton-miles	4,127,717
33	Passenger train-miles	21,011,502
34	Freight train-miles	8,369,988
35	Mixed train-miles	100,650
36	Work train-miles	201,570
37	Total train-miles	29,683,711
38	Locomotive-miles	40,120,973

HUNGARY.

Year Ended December 31, 1912.

Source: Ungarisches Statistisches Jahrbuch.

	Item.	Number or Amount. 1912.
1	Area (square miles)	125,641
2	Population (estimated)	21,240,000
3	Miles of line owned	13,332
4	Miles of second track	827
5	Miles of yard track and sidings	3,525
6	Total—miles of all track owned [a]	17,671
7	Capital	$949,581,820
8	Capital per mile	$71,226
9	Total operating revenues	$115,680,768
10	Total operating expenses	$73,912,097
11	Net operating revenue	$41,768,671
12	Operating ratio—per cent	63.89
13	Operating revenues per mile	$8,599
14	Operating expenses per mile	$5,451
15	Net operating revenue per mile	$3,148
16	Employees	147,194
17	Employees per mile	10.94
18	Aggregate compensation of employees	$44,218,935
19	Locomotives	4,219
20	Passenger cars	9,142
21	Mail cars	278
22	Freight cars	99,285
23	Locomotives per mile	.31
24	Passenger cars per mile	.68
25	Freight cars per mile	7.39
26	Aggregate seating capacity of passenger cars—total	358,560
	1st class	22,164
	2nd class	80,738
	3rd class	255,658
27	Aggregate capacity of freight cars (tons)	1,329,112

[a] Mileage figures taken from two tables; component parts do not quite add to total.

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HUNGARY (continued).

	Item.	Number or Amount. 1912.
28	Passengers carried—total	164,008,000
	1st class	1,756,000
	2nd class	24,012,000
	3rd class	134,762,000
	Military	3,478,000
29	Passengers carried per mile	12,350
30	Passengers carried one mile—total	3,141,325,840
	1st class	82,719,253
	2nd class	728,103,909
	3rd class	2,128,596,590
	Military	201,906,088
31	Average journey per passenger (miles)	19.1
	1st class	47.1
	2nd class	30.3
	3rd class	15.8
	Military	58.0
32	Passenger density (passenger-miles per mile)	236.556
33	Passenger revenue	$30,399,250
34	Passenger revenue per mile	$2,260
35	Average receipts per passenger (cents)	18.5
36	Average receipts per passenger-mile (cent)	.967
37	Passenger train revenue	$31,079,097
38	Passenger train revenue per mile	$2,310
39	Freight carried—tons	92,185,083
40	Freight carried per mile—tons	6,878
41	Freight carried—ton-miles	6,620,506,466
42	Freight density (ton-miles per mile)	494.002
43	Average haul per ton (miles)	71.8
44	Freight revenue	$80,337,656
45	Freight revenue per mile	$5,995
46	Average receipts per ton (cents)	87.3
47	Average receipts per ton-mile (cents)	1.215
48	Express and fast passenger train-miles	7,228,397
49	Ordinary passenger train-miles	29,131,687
50	Freight train-miles	33,952,275
51	Mixed train-miles	11,015,647
52	Work and supply train-miles	1,481,346
53	Total train-miles	82,809,352

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INDIA.

Calendar Year Ended December 31, 1912, and Fiscal Year Ended March 31, 1914.

Source: Administration Report on the Railways in India.

	Item.	Number or Amount. 1912. (calendar year)	Number or Amount. 1913–14. (fiscal year)
1	Area (square miles)	1,802,112	1,802,112
2	Population (1911)	315,086,372	315,086,372
3	Miles of line operated	33,484	34,656
4	Miles of additional main track	2,545	2,640
5	Total miles of main track	36,029	37,296
6	Miles of sidings	7,078	7,421
7	Total—miles of all track operated	43,107	44,717
8	Capital	$1,508,481,450	$1,605,565,195
9	Total operating revenues	$199,933,220	$206,208,101
10	Total operating expenses	$97,806,286	$106,793,287
11	Net operating revenue	$102,126,935	$99,414,814
12	Operating ratio—per cent	48.92	51.79
13	Operating revenues per mile	$5,971	$5,951
14	Operating expenses per mile	$2,922	$3,082
15	Net operating revenue per mile	$3,050	$2,869
16	Operating revenues per train-mile	$1.31	$1.32
17	Operating expenses per train-mile	$0.64	$0.68
18	Net operating revenue per train-mile	$0.67	$0.64
19	Employees	589,422	633,694
20	Locomotives	7,657	8,019
21	Motor cars	105	128
22	Passenger service cars	21,985	22,381
23	Freight cars	158,200	171,741
24	Lower class carriages	7,993	8,922
25	Passengers carried—total	417,229,400	457,717,900
	1st class	795,500	812,600
	2nd class	3,223,200	3,460,600
	Intermediate class	10,833,300	12,370,800
	3rd class	375,566,800	410,959,800
	Season and vendors' tickets (number of trips)	26,810,600	30,114,100
26	Passengers carried one mile	15,318,872,000	16,614,068,000
27	Average journey per passenger (miles)	36.72	36.30
28	Passenger revenue—total	$63,448,646	$68,670,849
	1st class	$2,039,847	$2,235,724
	2nd class	$2,701,743	$2,876,541
	Intermediate class	$2,963,128	$3,355,856
	3rd class	$55,174,781	$59,574,883
	Season and vendors' tickets	$569,147	$627,845
29	Average receipts per passenger-mile (cent)	.414	.414
30	Passenger train revenue	$71,228,928	$76,978,767
31	Freight carried—tons	87,892,000	92,526,560
32	Freight carried—ton-miles	17,504,026,400	17,498,023,200
33	Average haul per ton (miles)	199.15	189.11
34	Freight revenue	$122,969,371	$122,504,001
35	Average receipts per ton-mile (cent)	.703	.711

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INDIA (continued).

	Item.	Number or Amount. 1912. (calendar year)	Number or Amount. 1913–14. (fiscal year)
36	Passenger train-miles	52,093,000	55,972,000
37	Freight train-miles	59,992,000	57,933,000
38	Mixed train-miles	34,940,000	34,581,000
39	Total train-miles (including miscellaneous)	152,761,000	156,276,000

ITALY.

State Railways—Year Ended December 31, 1912.

Source: Ferrovie dello Stato; Statistica dell' Esercizio.

	Item.	Number or Amount. 1912.
1	Area (square miles)	110,688
2	Population (1912, estimated)	35,026,000
3	Miles of line operated	8,455
4	Average miles operated	8,405
5	Total operating revenues	$116,568,348
6	Total operating expenses	$97,871,890
7	Net operating revenue	$18,696,458
8	Operating revenues per mile	$13,868
9	Operating expenses per mile	$11,644
10	Net operating revenue per mile	$2,224
11	Operating revenues per train-mile	$1.650
12	Operating expenses per train-mile	$1.385
13	Net operating revenue per train-mile	$0.265
14	Employees (end of year)	113,927
15	Employees (average for year)[a]	148,569
16	Aggregate compensation of employees	$52,657,655
17	Average yearly compensation per employee	$354.43
18	Locomotives (steam)	5,055
19	Locomotives (electric)	55
20	Motor cars	150
21	Total—locomotives and motor cars	5,260
22	Passenger cars	10,345
23	Baggage cars (common)	2,699
24	Combination baggage and merchandise cars	62
25	Combination baggage and mail cars	899
26	Total baggage cars	3,660
27	Freight cars	95,428
28	Work cars	2,266
29	Total—all cars	111,699
30	Locomotives per mile	.58
31	Passenger cars per mile	1.15
32	Baggage cars per mile	.41
33	Freight cars per mile	10.58
34	Work cars per mile	.25
35	Total cars per mile	12.39

[a] Includes 34,661 temporary employees.

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ITALY (continued).

	Item.	Number or Amount. 1912.
36	Aggregate seating capacity of passenger cars	498,203
37	Average seats per car	49.24
38	Aggregate capacity of freight cars (tons)	1,617,488
39	Average capacity per freight car (tons)	16.99
40	Passengers carried[a]	89,690,138
41	Passenger revenue	$40,796,637
42	Passenger revenue per mile	$4,854
43	Freight carried—tons[b]	40,946,294
44	Freight revenue	$63,721,393
45	Freight revenue per mile	$7,581
46	Passenger train-miles	42,676,329
47	Freight train-miles	27,559,970
48	Work train-miles	409,452
49	Total train-miles	70,645,751
50	Locomotive and motor car-miles	95,382,541
51	Passenger car-miles	701,941,345
52	Freight car-miles	1,265,805,598
53	Other car-miles (postal, baggage, service, etc.)	244,996,073
54	Total car-miles	2,212,743,017

JAPAN.

State Railways—Years Ended March 31, 1913 and 1914.

Source: Report of Imperial Government Railways of Japan.

	Item.	Number or Amount. 1912-13.	Number or Amount. 1913-14.
1	Area (square miles)	147,657	147,657
2	Population (1912, estimated)	52,312,000	52,312,000
3	Miles of line operated	5,217	5,471
4	Miles of second track	719	.....
5	Miles of third track	5	.....
6	Miles of fourth track	4	.....
7	Miles of fifth track	1	.....
8	Miles of sixth track	1	.....
9	Miles of main track	5,947	.....
10	Total—miles of all track	7,774	8,202
11	Average miles operated	5,130	.....
12	Capital	$464,843,366	$484,988,802
13	Total operating revenues	$53,839,977	$56,556,964
14	Total operating expenses	$24,926,802	$27,188,341
15	Net operating revenue	$28,913,175	$29,368,623

[a] Excludes season ticket holders, etc.
[b] Does not include tons of baggage, newspapers, etc., the revenue from which is included in freight revenue.

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JAPAN (continued).

	Item.	Number or Amount. 1912-13.	Number or Amount. 1913-14.
16	Employees	109,983	112,087
17	Aggregate monthly compensation of employees	$1,043.481	.....
18	Average monthly compensation per employee.	$9.49	.....
19	Locomotives	2,381	2,499
20	Passenger cars	6,060	.....
21	Electric motor cars (passenger service)	72	.....
22	Steam motor cars (passenger service)	12	.....
23	Total passenger service cars	6,148	6,453
24	Freight cars	40,527	42,705
25	Aggregate seating capacity of passenger cars.	250,622	269,851
26	Aggregate capacity of freight cars (tons)	372,196	409,754
27	Passengers carried—total	160,711,737	167,773,143
	1st class	470,237	.....
	2nd class	7,414,035	.....
	3rd class	152,827,465	.....
28	Passengers carried one mile—total	3,626,316,499	3,690,964,619
	1st class	33,539,259	.....
	2nd class	367,907,593	.....
	3rd class	3,224,869,647	.....
29	Average journey per passenger (miles)	22.6	.....
30	Passenger revenue—total	$24,916,808	.....
	1st class	$555,903	.....
	2nd class	$3,514,003	.....
	3rd class	$20,846,902	.....
31	Passenger revenue per mile	$5,324	.....
32	Passenger revenue per train-mile	$1.01	.....
33	Average receipts per passenger (cents)	15	.....
34	Average receipts per passenger-mile (cent)	.69	.69
35	Passenger train revenue	$27,066,117	$27,898,110
36	Freight carried—tons	36,441,826	40,710,165
37	Freight carried—ton-miles	3,014,439,875	3,420,314,955
38	Average haul per ton (miles)	92.6	.....
39	Freight revenue	$24,523,654	.....
40	Average receipts per ton (cents)	67	.....
41	Average receipts per ton-mile (cent)	.814	.774
42	Freight train revenue	$24,609,832	$26,599,076
43	Freight train revenue per mile	$4,801	.....
44	Freight train revenue per train-mile	$0.90	.....
45	Parcels and baggage carried—tons	122,618	.....
46	Passenger train-miles	19,849,354	.....
47	Freight train-miles	20,904,690	.....
48	Mixed train-miles	12,742,297	.....
49	Electric and steam motor train-miles	497,591	.....
50	Total train-miles	53,993,932	57,402,803
51	Average tons per train	110.7	.....
52	Locomotive-miles	64,753,040	68,664,112
53	Passenger car-miles	325,263,635	.....
54	Freight car-miles	662,992,352	.....
55	Total car-miles	988,255,987	1,082,208,212
56	Average passenger cars per train	12.2	.....

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MEXICO.

National Railways—Years Ended June 30, 1912 and 1913.

Source: Annual Report of Ferrocarriles Nacionales de México.

	Item.	Number or Amount. 1912.	Number or Amount. 1913.
1	Area (square miles)	767,260	767,260
2	Population (1912, estimated)	15,501,684	15,501,684
3	Total miles of main track owned	6,167	6,193
4	Miles of yard track and sidings	880	901
5	Total—miles of all track owned	7,047	7,094
6	Miles of line operated	6,003	6,136
7	Average miles operated	6,008	6,089
8	Capital	$419,852,819	$419,457,875
9	Total operating revenues	$30,631,724	$28,599,086
10	Total operating expenses	$19,159,975	$18,067,608
11	Net operating revenue	$11,471,749	$10,531,478
12	Operating ratio—per cent	62.55	63.18
13	Operating revenues per mile	$5,099	$4,697
14	Operating expenses per mile	$3,189	$2,967
15	Net operating revenue per mile	$1,910	$1,730
16	Operating revenues per train-mile	$2.74	$2.80
17	Operating expenses per train-mile	$1.71	$1.77
18	Net operating revenue per train-mile	$1.03	$1.03
19	Taxes	$238,586	$210,727
20	Employees	31,179	25,852
21	Locomotives	744	729
22	Passenger service cars	548	553
23	Freight and company cars	19,523	18,492
24	Aggregate capacity of freight and company cars (tons)	680,358	654,998
25	Revenue passengers carried	8,096,302	8,665,654
26	Passengers carried one mile	470,669,184	464,480,917
27	Passenger density (passenger-miles per mile)	78,344	76,277
28	Average journey per passenger (miles)	58.13	53.60
29	Passenger revenue	$6,753,871	$6,451,114
30	Average receipts per passenger (cents)	83.4	74.4
31	Average receipts per passenger-mile (cents)	1.435	1.389
32	Passenger train revenue	$7,893,423	$7,611,126
33	Passenger train revenue per mile	$1,314	$1.250
34	Receipts per passenger train-mile	$1.78	$1.92
35	Revenue freight carried—tons*	7,139,526	6,538,248
36	Freight carried—ton-miles.*	1,585,732,991	1,374,580,617
37	Freight density (ton-miles per mile)*	263,950	225,732
38	Average haul per ton (miles)*	222.1	210.2
39	Freight revenue*	$21,545,643	$19,835,109
40	Freight revenue per mile*	$3,586	$3,257
41	Average receipts per ton*	$3.018	$3.034
42	Average receipts per ton-mile (cents)*	1.359	1.443
43	Receipts per freight train-mile*	$3.20	$3.18

* Freight statistics are exclusive of construction freight, which annually comprises approximately 150,000 tons and represents about $300,000 in revenue.

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MEXICO (continued).

	Item.	Number or Amount. 1912.	Number or Amount. 1913.
44	Revenue train-miles—total	11,169,012	10,209,208
45	Passenger train-miles	4,091,480	3,580,750
46	Freight train-miles	5,682,436	5,097,244
47	Mixed train-miles	1,395,096	1,531,214
48	Non-revenue train-miles	561,719	599,895
49	Passenger car-miles	25,340,327	23,604,257
50	Freight car-miles	140,843,444	120,281,794
	Loaded	95,561,120	81,048,095
	Empty	45,282,324	39,233,699

NEW ZEALAND.

State Railways—Year Ended March 31, 1913.

Source: Railways Statement.

	Item.	Number or Amount. 1912-13.
1	Area (square miles)	104,471
2	Population	1,111,592
3	Population per mile of line	391
4	Miles of line operated	2,860
5	Average miles operated	2,840
6	Capital	$153,836,002
7	Capital per mile	$53,789
8	Total operating revenues	$19,324,881
9	Total operating expenses	$13,166,846
10	Net operating revenue	$6,158,035
11	Operating ratio—per cent	68.13
12	Operating revenues per mile	$6,813
13	Operating expenses per mile	$4,643
14	Net operating revenue per mile	$2,170
15	Operating revenues per train-mile	$2.14
16	Operating expenses per train-mile	$1.46
17	Net operating revenue per train-mile	$0.68
18	Employees (average for year)	14,213
19	Aggregate compensation of employees	$8,984,824
20	Locomotives	513
21	Passenger cars	1,282
22	Freight cars	19,515
23	Aggregate seating capacity of passenger cars	53,819
24	Aggregate carrying capacity of freight cars (tons)	177,438

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NEW ZEALAND (continued).

	Item.	Number or Amount. 1912–13.
25	Passengers carried (excluding season ticket holders)—total...	13,123,879
26	1st class.....	2,033,796
27	2nd class.....	11,090,083
28	Season tickets issued.....	265,259
29	Passenger revenue (excluding revenue from season tickets)...	$6,396,236
30	Passenger revenue (including revenue from season tickets)...	$7,114,200
31	Passenger train revenue.....	$8,161,520
32	Freight carried—tons.....	6,995,663
33	Freight revenue.....	$10,500,379
34	Train-miles	9,016,224

NORWAY.

Years Ended June 30, 1912 and 1914.

Source: Norges Officielle Statistik: de Offentlige Jernbaner.

	Item.	Number or Amount. 1912.	Number or Amount. 1914.
1	Area (square miles)[a].....	119,656	119,656
2	Population (1912, estimated).....	2,439,000	2,439,000
3	Miles of line.....	1,917	1,966
4	Miles of all track.....	2,235	2,305
5	Average miles operated.....	1,914	1,952
6	Capital	$82,791,431	$88,414,230
7	Capital per mile.....	$43,187	$44,961
8	Total operating revenues.....	$7,363,640	$9,123,636
9	Total operating expenses.....	$5,558,864	$7,605,663
10	Net operating revenue.....	$1,804,776	$1,517,973
11	Operating ratio—per cent.....	75.5	83.4
12	Operating revenues per mile.....	$3,841	$4,673
13	Operating expenses per mile.....	$2,900	$3,895
14	Net operating revenue per mile.....	$941	$778
15	Operating revenues per train-mile.....	$1.05	$1.16
16	Operating expenses per train-mile.....	$0.79	$0.97
17	Net operating revenue per train-mile.....	$0.26	$0.19
18	Employees	6,589	7,479
19	Passengers carried.....	15,949,974	18,637,638
20	Passengers carried one mile.....	251,335,516	299,668,365
21	Passenger density (passenger-miles per mile).	131,114	153,492
22	Average journey per passenger (miles).....	15.78	16.03
23	Passenger train revenue.....	$3,277,000	$4,182,596
24	Passenger train revenue per mile.....	$1,709	$2,142
25	Average receipts per passenger-mile (cents)..	1.208	1.294
26	Freight carried—tons.....	7,153,920	8,513,967
27	Freight carried—ton-miles.....	248,286,438	287,203,525
28	Freight density (ton-miles per mile).....	129,524	147,107
29	Average haul per ton (miles).....	34.73	33.74
30	Freight revenue.....	$3,960,930	$4,799,013
31	Freight revenue per mile.....	$2,066	$2,458
32	Average receipts per ton-mile (cents).....	1.448	1.682
33	Train density (train-miles per mile).....	3,655	4,021

[a] Excludes water area.

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PORTUGAL.

Year Ended December 31, 1910.

Source: British Statistical Abstract for the Principal and other Foreign Countries.

	Item.	Number or Amount. 1910.
1	Area (square miles)	34,266
2	Population (1912, estimated)	5,596,000
3	Miles of line	1,521
4	Operating revenues (passenger and freight traffic)	$11,010,835
5	Operating expenses (passenger and freight traffic)	$5,543,018
6	Net operating revenue (passenger and freight traffic)	$5,467,818
7	Passengers carried	14,888,707
8	Passenger revenue	$4,426,587
9	Freight carried—tons	5,340,486
10	Freight revenue	$6,584,248

ROUMANIA.

Year Ended March 31, 1913.

Source: Dare de Seamă Statistică Asupra Exploatărei Căilor Ferate Române.

	Item.	Number or Amount. 1912–13.
1	Area (square miles)	50,715
2	Population (December 19, 1912)	7,248,061
3	Miles of line operated	2,205
4	Miles of second track	77
5	Average miles operated	2,195
6	Capital	$198,654,047
7	Total operating revenues	$21,574,119
8	Total operating expenses	$13,913,617
9	Net operating revenue	$7,660,502
10	Operating ratio—per cent	64.49
11	Operating revenues per mile	$9,830
12	Operating expenses per mile	$6,340
13	Net operating revenue per mile	$3,490
14	Operating revenues per train-mile	$1.55
15	Operating expenses per train-mile	$1.00
16	Net operating revenue per train-mile	$0.55
17	Employees	31,459
18	Employees per mile	14.34
19	Aggregate compensation of employees	$7,845,955
20	Compensation per mile	$3,575

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ROUMANIA (continued).

	Item.	Number or Amount. 1912-13.
21	Locomotives	821
22	Snow plows	43
23	Passenger cars	1,499
24	Mail cars	143
25	Baggage cars	140
26	Freight cars	21,278
27	Total cars	23,060
28	Locomotives per mile	.37
29	Aggregate capacity of passenger cars (places)—total	49,401
	1st class	7,015
	2nd class	10,480
	3rd class	31,906
30	Passengers carried—total	12,238,617
	1st class	481,580
	2nd class	1,837,627
	3rd class	9,735,364
	Military	184,046
31	Passengers carried per mile	5,631
32	Passengers carried one mile—total	544,771,781
	1st class	34,702,135
	2nd class	112,172,587
	3rd class	380,756,693
	Military	17,140,366
33	Passenger density (passenger-miles per mile)	250,637
34	Passenger revenue—total	$7,904,606
	1st class	$937,934
	2nd class	$2,132,808
	3rd class	$4,682,844
	Military	$151,020
35	Passenger revenue per mile	$3,637
36	Average receipts per passenger (cents)	64.66
37	Average receipts per passenger-mile (cents)	1.451
38	Revenue freight carried—tons	9,718,484
39	Non-revenue freight carried—tons	2,194,146
40	Total freight carried—tons	11,912,630
41	Revenue freight carried per mile—tons	4,428
42	Revenue freight carried—ton-miles	982,581,606
43	Freight density (ton-miles per mile)	445,523
44	Average haul per ton (miles)	99.8
45	Freight revenue	$12,743,801
46	Freight revenue per mile	$5,807
47	Average receipts per ton-mile (cents)	1.297
48	Baggage carried—tons	25,779
49	Baggage carried—ton-miles	3,126,688
50	Baggage density (ton-miles per mile)	1,439
51	Baggage revenue	$258,142
52	Baggage revenue per mile	$119
53	Average receipts per ton-mile—baggage (cents)	8.256
54	Passenger train-miles	6,116,031
55	Mixed train-miles	1,086,359
56	Freight train-miles	5,750,437
57	Work train-miles	281,807
58	Total train-miles	13,234,634
59	Total locomotive-miles	19,162,517
60	Locomotive-miles per locomotive	24,058

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RUSSIA.

(Asiatic and European, exclusive of Finland.)

Year Ended December 31, 1910.

Source: Recueil Statistique du Ministère des Voies de Communication—Russie.

	Item.	Number or Amount. 1910.
1	Area (square miles)	7,773,675
2	Population	163,919,000
3	Miles of line	40,360
4	Miles of double or more track	9,155
5	Average miles operated	40,171
6	Capital	$3,508,676,337
7	Capital per mile	$149,814
8	Total operating revenues	$499,094,246
9	Total operating expenses	$335,360,716
10	Net operating revenue	$163,733,530
11	Taxes (included in operating expenses)	$1,026,962
12	Employees	771,938
13	Aggregate compensation of employees	$163,184,625
14	Locomotives	19,984
15	Passenger cars	23,334
16	Mail cars	730
17	Baggage cars	1,979
18	Freight cars	450,273
19	Passengers carried	195,016,935
20	Passengers carried one mile	14,432,163,038
21	Average receipts per passenger-mile (cent)	.699
22	Freight carried—tons	259,200,415
23	Freight carried—ton-miles	41,506,826,494
24	Average receipts per ton-mile (cent)[a]	.933

SIAM.

State Railways—Years Ended March 31, 1913 and 1914.

Source: Administration Report on the Traffic of the Royal State Railways (broad gauge).

	Item.	Number or Amount. 1912-13.	Number or Amount. 1913-14.
1	Area (square miles)	200,000	200,000
2	Population (1910, estimated)	8,120,000	8,120,000
3	Average miles operated	500	506
4	Capital	$20,028,054	$20,305,964
5	Capital per mile	$40,074	$40,097

[a] Receipts for slow freight only.

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SIAM (continued).

	Item.	Number or Amount. 1912-13.	Number or Amount. 1913-14.
6	Total operating revenues	$1,301,259	$1,588,384
7	Total operating expenses	$494,315	$563,002
8	Net operating revenue	$806,944	$1,025,382
9	Operating ratio—per cent	37.99	35.44
10	Operating revenues per mile	$2,604	$3,137
11	Operating expenses per mile	$989	$1,112
12	Net operating revenue per mile	$1,615	$2,025
13	Operating revenues per train-mile	$1.37	$1.58
14	Operating expenses per train-mile	$0.52	$0.56
15	Net operating revenue per train-mile	$0.85	$1.02
16	Employees	.....	2,770
17	Locomotives	57	59
18	Passenger service cars	209	210
19	Freight cars	806	806
20	Total cars	1,015	1,016
21	Passengers carried—total	2,111,099	2,354,722
	1st class	5,624	6,324
	2nd class	28,655	34,033
	3rd class	2,076,820	2,314,365
22	Passengers carried per mile	4,225	4,649
23	Passengers carried one mile	63,383,251	72,657,743
24	Average journey per passenger (miles)	30.0	30.9
25	Passenger revenue—total	$755,428	$873,993
	1st class	$12,360	$12,959
	2nd class	$32,710	$37,406
	3rd class	$710,358	$823,628
26	Average receipts per passenger (cents)	36.0	37.1
27	Average receipts per passenger-mile (cents)	1.188	1.205
	1st class	2.811	2.823
	2nd class	1.665	1.635
	3rd class	1.164	1.176
28	Passenger train revenue	$765,488	$883,940
29	Passenger train revenue per mile	$1,532	$1,745
30	Ratio of passenger train revenue to total revenues—per cent	58.82	55.65
31	Freight carried—tons	265,691	372,474
32	Freight carried—ton-miles	33,541,277	46,869,144
33	Average haul per ton (miles)	126.2	125.8
34	Freight revenue	$506,121	$671,200
35	Average receipts per ton	$1.904	$1.803
36	Average receipts per ton-mile (cents)	1.505	1.435
37	Freight train revenue	$509,672	$674,833
38	Freight train revenue per mile	$1,020	$1,333
39	Ratio of freight train revenue to total revenues—per cent	39.17	42.48
40	Baggage carried—tons	1,489	1,106
41	Baggage revenue	$7,531	$6,679
42	Average receipts per ton—baggage	$5.06	$6.04
43	Total trains	14,939	16,214
44	Total train-miles	950,367	1,004,340
45	Locomotive-miles	973,205	1,037,949

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SPAIN.

Years Ended December 31, 1909 and 1912.

Source: Estadística de las Obras Públicas de España; Ferrocarriles y Tranvias.

	Item.	Number or Amount. 1909.	Number or Amount. 1912.
1	Area (square miles)	191,987	191,987
2	Population (estimated)	19,442,000	19,691,000
3	Miles of line operated	9,076	9,291
4	Miles of second track	213	.....
5	Total miles of main track	9,289	.....
6	Average miles operated	.....	8,895
7	Capital	$729,929,464	.....
8	Capital per mile	$89,348	.....
9	Total operating revenues	$65,524,438	$76,063,312
10	Total operating expenses	$32,194,639	$36,460,021
11	Net operating revenue	a$33,475,620	$39,603,290
12	Operating ratio—per cent	55.14	.....
13	Operating revenues per mile	$7,377	$8,551
14	Operating expenses per mile	$3,587	.....
15	Net operating revenue per mile	$3,790	.....
16	Operating revenues per train-mile	$1.62	.....
17	Operating expenses per train-mile	$0.80	.....
18	Net operating revenue per train-mile	$0.83	.....
19	Locomotives	2,533	2,383
20	Passenger cars	6,189	6,075
21	Freight cars	50,109	46,675
22	Locomotives per mile	.23	.....
23	Passenger cars per mile	.56	.....
24	Freight cars per mile	5.09	.....
25	Aggregate horse-power of locomotives	1,353,605	1,396,550
26	Average horse-power per locomotive	542	.....
27	Aggregate seating capacity of passenger cars.	249,679	246,070
28	Seating capacity per car	40	.....
29	Aggregate carrying capacity of freight cars—tons	593,246	.....
30	Carrying capacity per freight car (tons)	11.8	.....
31	Passengers carried—total	51,408,194	53,965,139
	1st class	a2,718,305	.....
	2nd class	a8,541,207	.....
	3rd class	a41,760,029	.....
32	Passengers carried one mile	1,174,197,401	.....
33	Passenger density (passenger-miles per mile).	139,736	.....
34	Passenger revenue	$18,006,551	$20,401,312
35	Passenger revenue per mile	$2,049	.....
36	Average receipts per passenger (cents)	35	.....
37	Average receipts per passenger-mile (cents).	1.522	.....
38	Freight carried—tons	34,675,117	35,073,107
39	Freight carried—ton-miles	2,113,402,384	.....
40	Freight density (ton-miles per mile)	240,166	.....
41	Freight revenue	$47,070,712	$54,696,454
42	Freight revenue per mile	$5,302	.....
43	Average receipts per ton-mile (cents)	2.226	.....

a As reported.

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SPAIN (continued).

	Item.	Number or Amount. 1909.	Number or Amount. 1912.
44	Total train-miles	40,458,333	.....
45	Locomotive-miles	46,427,428	.....
46	Passenger car-miles	130,011,603	.....
47	Freight car-miles	469,023,147	.....

SWEDEN.

Year Ended December 31, 1912.

Source: Sverges Officiella Statistik; Allmän Järnvägsstatistik.

	Item.	Number or Amount. 1912.
1	Area (square miles)[a]	158,438
2	Population (1912, estimated)	5,604,000
3	Miles of line operated	8,806
4	Miles of second track	135
5	Miles of yard track and sidings	1,925
6	Total miles of all track operated	10,866
7	Average miles operated	8,721
8	Miles of line per 100 square miles of area	5.20
9	Miles of line per 10,000 population	15.71
10	Capital	$300,315,971
11	Capital per mile	$33,940
12	Total operating revenues	$43,390,295
13	Total operating expenses	$30,428,536
14	Net operating revenue	$12,961,759
15	Operating ratio—per cent	70.13
16	Operating revenues per mile	$4,975
17	Operating expenses per mile	$3,489
18	Net operating revenue per mile	$1,486
19	Operating revenues per train-mile	$1.22
20	Operating expenses per train-mile	$0.82
21	Net operating revenue per train-mile	$0.41
22	Employees (average for year)	48,330
23	Employees per mile	5.54
24	Aggregate compensation of employees	$19,763,555
25	Average yearly compensation per employee	$409
26	Tender locomotives	1,217
27	Tank locomotives	732
28	Electric locomotives	2
29	Total locomotives	1,951
30	Motor cars	35
31	Passenger cars (including mail and combination cars)	3,785
32	Freight cars	49,272
33	Company cars	97

[a] Excludes water area.

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SWEDEN (continued).

	Item.	Number or Amount. 1912.
34	Aggregate seating capacity of passenger cars	156,249
35	Aggregate capacity of freight cars (tons)	686,990
36	Passengers carried—total	62,957,030
	1st class	49,400
	2nd class	3,073,020
	3rd class	59,037,590
	Military	797,020
37	Passengers carried one mile—total	1,074,772,915
	1st and 2nd classes	179,368,067
	3rd class	855,349,787
	Military	40,055,061
38	Passenger density (passenger-miles per mile)	123,972
39	Average journey per passenger (miles)	17.07
40	Passenger revenue	$13,398,766
41	Average receipts per passenger (cents)	21.2
42	Average receipts per passenger-mile (cents)	1.246
43	Passenger train revenue	$13,796,935
44	Passenger train revenue per mile	$1,591
45	Revenue freight carried—tons	43,720,503
46	Non-revenue freight carried—tons	1,946,316
47	Total freight carried—tons	45,666,818
48	Revenue freight carried—ton-miles	2,001,008,202
49	Non-revenue freight carried—ton-miles	105,647,488
50	Total freight carried—ton-miles	2,106,655,690
51	Revenue freight density (ton-miles per mile)	229,468
52	Average haul per revenue ton (miles)	45.79
53	Average haul per ton (miles)	46.11
54	Freight revenue	$27,499,812
55	Freight revenue per mile	$3,154
56	Average receipts per ton	$1.12
57	Average receipts per ton-mile (cents)	1.373
58	Mail revenue	$1,070,107
59	Total train-miles	34,944,293
60	Train density (train-miles per mile)	4,010
61	Locomotive-miles	44,570,432

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SWITZERLAND.

Years Ended December 31, 1912 and 1913.

Source: Statistique des Chemins de Fer Suisses.

	Item.	Number or Amount. 1912.	Number or Amount. 1913.
1	Area (square miles)*a*	15,445	15,445
2	Population (1912, estimated)	3,825,000	3,825,000
3	Miles of line owned	2,959	3,091
4	Miles of second track	669	711
5	Miles of line operated	3,022	3,155
6	Average miles operated	3,012	3,105
7	Capital	$362,718,808	$402,351,568
8	Capital per mile	$122,010	$129,597
9	Total operating revenues	$48,027,080	$49,776,410
10	Total operating expenses	$31,852,495	$33,329,586
11	Net operating revenue	$16,174,585	$16,446,824
12	Operating ratio—per cent	66.32	66.96
13	Operating revenues per mile	$15,945	$16,030
14	Operating expenses per mile	$10,575	$10,733
15	Net operating revenue per mile	$5,370	$5,297
16	Operating revenues per train-mile	$1.59	$1.55
17	Operating expenses per train-mile	$1.05	$1.04
18	Net operating revenue per train-mile	$0.53	$0.51
19	Employees (average for year)	42,608	45,738
20	Aggregate compensation of employees	$15,635,390	$16,697,901
21	Steam locomotives	1,529	1,538
22	Electric locomotives	65	96
23	Total locomotives	1,594	1,634
24	Motor cars	283	322
25	Passenger cars	4,596	4,748
26	Baggage cars	960	989
27	Freight cars	17,334	17,690
28	Work cars	1,213	1,160
29	Shippers' trucks	50	72
30	Aggregate weight of steam locomotives (including tenders)—tons	98,507	100,076
31	Average weight per steam locomotive (including tenders)—tons	64.4	65.0
32	Aggregate weight of electric locomotives—tons	1,414	3,527
33	Average weight per electric locomotive—tons.	21.7	36.7
34	Aggregate seating capacity of passenger cars.	230,553	240,527
35	Aggregate standing room in passenger cars...	3,954	4,662
36	Aggregate capacity of freight cars (tons)....	235,485	242,172
37	Passengers carried—total	123,523,422	128,778,634
	1st class	655,157	705,779
	2nd class	8,520,153	8,781,986
	3rd class	107,276,734	111,422,955
	Special class	7,071,378	7,867,914
38	Passengers carried per mile	41,009	41,471

a Excludes water area.

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SWITZERLAND (continued).

	Item.	Number or Amount. 1912.	Number or Amount. 1913.
39	Passengers carried one mile—total	1,568,259,579	1,672,007,290
	1st class	37,415,184	39,578,700
	2nd class	259,366,081	273,669,926
	3rd class	1,248,490,687	1,332,321,409
	Special class	22,987,627	26,437,255
40	Passenger density (passenger-miles per mile)	520,666	538,448
41	Average journey per passenger (miles)	12.69	12.98
42	Passenger revenue—total	$20,077,596	$21,421,583
	1st class	$1,179,412	$1,261,760
	2nd class	$4,851,097	$5,124,005
	3rd class	$13,217,604	$14,096,310
	Special class	$829,483	$939,508
43	Passenger revenue per mile	6,666	6,899
44	Average receipts per passenger (cents)	16.2	16.6
45	Average receipts per passenger-mile (cents)	1.280	1.280
46	Freight carried—tons *	21,620,657	21,328,055
47	Freight carried per mile—tons *	7,178	6,869
48	Freight carried—ton-miles *	984,591,942	998,508,448
49	Freight density (ton-miles per mile)*	326,887	321,557
50	Average haul per ton (miles)*	45.54	46.81
51	Freight revenue.*	$25,991,431	$26,288,802
52	Freight revenue per mile *	$8,629	$8,466
53	Average receipts per ton-mile (cents)*	2.640	2.632
54	Baggage carried—tons	363,067	363,718
55	Baggage revenue	$1,940,610	$2,003,546
56	Average receipts per ton—baggage	$5.35	$5.51
57	Average receipts per ton-mile—baggage (cents)	17.81	17.35
58	Live stock carried—tons	285,380	264,822
59	Live stock revenue	$756,717	$686,582
60	Average receipts per ton-mile—live stock (cents)	6.937	7.151
61	Passenger train-miles (including mixed)	22,851,767	24,403,094
62	Freight train-miles	7,414,329	7,734,357
63	Total train-miles	30,266,096	32,137,451
64	Train density (train-miles per mile)	10,048	10,349
65	Trains per day	27.46	28.36

* Including baggage and live stock.

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UNION OF SOUTH AFRICA.

State Railways—Years Ended December 31, 1912 and 1914.

Source: Report of the Board of the South African Railways and Harbours.

	Item.	Number or Amount. 1912.	Number or Amount. 1914.
1	Area (square miles)	473,184	473,184
2	Population (1912, estimated)	6,211,900	6,211,900
3	Miles of line operated	7,848	8,486
4	Average miles operated	7,600	8,428
5	Capital	$386,261,419	$412,570,993
6	Total operating revenues	$60,764,856	$56,320,997
7	Total operating expenses	$39,480,328	$43,020,872
8	Net operating revenue	$21,284,528	$13,300,125
9	Operating ratio—per cent	65.0	76.4
10	Operating revenues per mile	$7,996	$6,682
11	Operating expenses per mile	$5,193	$5,105
12	Net operating revenue per mile	$2,803	$1,577
13	Operating revenues per train-mile	$2.16	$1.90
14	Operating expenses per train-mile	$1.40	$1.45
15	Net operating revenue per train-mile	$0.76	$0.45
16	Employees	55,273	52,890
17	Locomotives	1,454	1,522
18	Passenger service cars	2,397	2,610
19	Freight service cars	23,968	26,196
20	Passengers carried	41,450,491	41,900,729
21	Passenger train revenue	$18,127,620	$17,670,914
22	Revenue freight carried—tons	13,157,310	13,466,836
23	Non-revenue freight carried—tons	2,364,678	2,492,572
24	Total freight carried—tons	15,521,988	15,959,408
25	Revenue freight carried—ton-miles	2,252,683,784	.....
26	Non-revenue freight carried—ton-miles	711,046,904	.....
27	Total freight carried—ton-miles	2,963,730,688	.....
28	Average haul per ton (miles)	191	.....
29	Freight revenue	$41,306,852	$37,413,336
30	Average receipts per ton-mile (freight other than coal)—cents	2.902	.....
31	Average receipts per ton-mile (coal)—cent	.975	.....
32	Total train-miles	28,173,706	29,701,991
33	Locomotive-miles	36,154,189	38,161,437

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UNITED KINGDOM.

Year Ended December 31, 1912.

Source: Returns of the Capital, Traffic, Receipts, and Working Expenditure of the Railway Companies of the United Kingdom.

	Item.	Number or Amount. 1912.
1	Area (square miles)	121,439
2	Population (1912, estimated)	45,663,000
3	Miles of line	23,441
4	Miles of second, third, fourth, etc., tracks	16,593
5	Total miles of main track	40,034
6	Miles of yard track and sidings	14,875
7	Total—miles of all tracks	54,909
8	Capital—total	$6,496,599,960
9	Ordinary, preferred, and guaranteed stock	$4,742,856,771
10	Loans and debenture stock	$1,753,743,189
11	Total operating revenues	$625,605,204
12	Total operating expenses	$395,278,265
13	Net operating revenue	$230,326,939
14	Operating ratio—per cent	63
15	Rates and taxes (included in operating expenses)	$24,995,332
16	Employees (approximate)[a]	608,750
17	Locomotives	22,998
18	Passenger cars[b]	52,888
19	Other passenger train cars	20,000
20	Freight cars	757,884
21	Other cars	22,636
22	Total cars	853,408
23	Locomotives per mile	.98
24	Passenger cars per mile	2.26
25	Other passenger train cars per mile	.85
26	Freight cars per mile	32.33
27	Other cars per mile	.97
28	Total cars per mile	36.41
29	Passengers carried (excluding season ticket holders)—total	1,294,337,000
	1st class	30,011,000
	2nd class	14,952,000
	3rd class	1,249,374,000
30	Season or periodical ticket holders	785,135
31	Passenger revenue (excluding revenue from season ticket holders)	$190,510,554
	1st class	$17,673,551
	2nd class	$5,737,973
	3rd class	$167,099,030
32	Revenue from season ticket holders	$24,742,284
33	Total passenger revenue	$215,252,838
34	Passenger revenue per mile (excluding revenue from season ticket holders)	$8,127
35	Revenue from season ticket holders per mile	$1,056
36	Total passenger revenue per mile	$9,183

a From Great Britain General Report on Accidents.
b Includes rail motor cars.

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UNITED KINGDOM (continued).

	Item.	Number or Amount. 1912.
37	Passenger train revenue	$264,048,513
38	Passenger train revenue per mile	$11,266
39	Receipts per passenger train-mile[a]	$1.02
40	Average receipts per passenger (cents)[b]	14.8
	1st class	58.8
	2nd class	38.3
	3rd class	13.4
41	Freight carried—minerals (tons)	449,751,610
42	Freight carried—general merchandise (tons)	132,961,013
43	Total freight carried—tons	582,712,623
44	Freight revenue—minerals	$141,981,013
45	Freight revenue—general merchandise	$162,712,703
46	Freight revenue—live stock	$6,999,837
47	Total freight revenue	$311,693,553
48	Freight revenue per mile—minerals	$6,059
49	Freight revenue per mile—general merchandise	$6,940
50	Freight revenue per mile—live stock	$296
51	Freight revenue per mile—total	$13,295
52	Receipts per freight train-mile[a]	$2.05
53	Passenger train-miles	258,768,379
54	Freight train-miles	151,892,869
55	Mixed train-miles	1,858,927
56	Total train-miles	412,520,175

[a] Exclusive of receipts on railways in cases where the traffic is conveyed by mixed trains.
[b] Excludes season ticket holders.

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PART II.

COMPARATIVE AVERAGES AND RATIOS

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NOTE.

Unless otherwise specified, the averages and ratios of Part II apply to the railway mileage shown in the tables of Part I. In the case of certain countries. this mileage is not the entire steam railway mileage of the country, and the averages or ratios for those countries are representative of their railways only in so far as the mileage shown in Part I is representative of the total mileage. These countries are the following:

Argentine,
Australia (commonwealth and states),
Belgium,
Brazil,
China,
Denmark,
Egypt,
Italy,
Japan,
Mexico,
New Zealand,
Siam,
Union of South Africa.

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MILES OF LINE OPERATED PER 100 SQUARE MILES OF AREA.

1912.

	Miles.		Miles.
United States	*8.40	France (1911)	12.18
		Germany	*18.08
Algeria and Tunis (1911)	*1.06	Holland	*18.30
Argentine	*1.79	Hungary	*10.61
Australia	*0.63	India	*1.86
New South Wales	*1.32	Italy	*9.78
Queensland	*0.69	Japan	*4.07
South Australia	*0.53	Mexico	*2.06
Victoria	*4.18	New Zealand	*2.77
Western Australia	*0.35	Norway	*1.60
Austria	12.20	Portugal (1910)	*4.44
Belgium	*25.78	Roumania	*4.42
Brazil	*0.42	Russia (1910)	*0.52
Bulgaria	*3.23	Siam	*0.35
Canada	*0.72	Spain	*4.84
Chile	*1.71	Sweden	5.20
Cuba	*5.67	Switzerland	*19.38
Denmark	*15.45	Union of South Africa	*1.77
Egypt	*30.56	United Kingdom	*19.30

MILES OF LINE OPERATED PER 10,000 POPULATION.

1912.

	Miles.		Miles.
United States	*26.15	France (1911)	6.37
		Germany	*5.71
Algeria and Tunis (1911)	*3.83	Holland	*3.77
Argentine	*28.08	Hungary	*6.28
Australia	*41.93	India	*1.06
New South Wales	*24.89	Italy	*3.09
Queensland	*74.49	Japan	*1.15
South Australia	45.70	Mexico	*10.22
Victoria	*26.61	New Zealand	*25.99
Western Australia	*113.47	Norway	*7.86
Austria	4.98	Portugal (1910)	*2.72
Belgium	*3.87	Roumania	*3.09
Brazil	*6.00	Russia (1910)	*2.46
Bulgaria	*2.73	Siam	*0.86
Canada	*34.45	Spain	*4.72
Chile	*14.29	Sweden	15.71
Cuba	*10.40	Switzerland	*7.83
Denmark	*8.30	Union of South Africa	*13.51
Egypt	*3.02	United Kingdom	*5.13

* Computed by Bureau of Railway Economics on basis of total mileage statistics shown on page 11.

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CAPITAL PER MILE OF LINE.

1912.

United States	$63,535	France (1911)	$148,436
		Germany	116,365
Algeria and Tunis (1911)	55,108	Hungary	71,226
Australia	46,130	India	*45,051
New South Wales	67,970	Japan	*89,102
Queensland	31,657	Mexico (National Railways)	*59,579
South Australia	44,120	New Zealand	53,789
Victoria	61,586	Norway	43,187
Western Australia	26,060	Roumania	*90,093
Austria	121,327	Russia (1910)	149,814
Belgium	*216,143	Siam	40,074
Bulgaria (1911)	*47,133	Spain (1909)	89,348
Canada[a]	*64,054	Sweden	33,940
Chile (1913)	*48,265	Switzerland	122,010
China (Peking-Mukden Line)	*32,902	Union of South Africa	*49,218
Denmark	*61,839	United Kingdom	*277,147

OPERATING REVENUES PER MILE OF LINE.

1912.

United States	$11,482	France (1911)	$14,521
		Germany	22,026
Algeria and Tunis (1911)	4,681	Holland	*13,440
Argentine	*6,302	Hungary	8,599
Australia	5,621	India	5,971
New South Wales	8,315	Italy	13,868
Queensland	3,562	Japan	*10,495
South Australia	6,964	Mexico (National Railways)	5,099
Victoria	7,168	New Zealand	6,813
Western Australia	3,713	Norway	3,841
Austria	16,049	Portugal (1910)	*7,239
Belgium	23,665	Roumania	9,830
Brazil (1911)	*7,324	Russia (1910)	*12,424
Bulgaria (1911)	4,505	Siam	2,604
Canada	8,209	Spain	8,551
Chile (1913)	*5,732	Sweden	4,975
China (Peking-Mukden Line)	*8,680	Switzerland	15,945
Cuba (1911)	*5,709	Union of South Africa	7,996
Denmark	12,141	United Kingdom	*26,689
Egypt	13,024		

* Computed by Bureau of Railway Economics.
a Does not cover government subsidies.

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OPERATING EXPENSES PER MILE OF LINE.

1912.

United States	$7,968	France (1911)	$9,084
		Germany	14,860
Algeria and Tunis (1911)	2,949	Holland	*9,332
Argentine	*3,977	Hungary	5,451
Australia	3,669	India	2,922
New South Wales	5,341	Italy	11,644
Queensland	2,252	Japan	*4,859
South Australia	4,312	Mexico (National Railways)	3,189
Victoria	4,545	New Zealand	4,643
Western Australia	2,647	Norway	2,900
Austria	11,976	Portugal (1910)	*3,644
Belgium	16,406	Roumania	6,340
Brazil (1911)	*6,352	Russia (1910)	*8,348
Bulgaria (1911)	2,837	Siam	989
Canada	5,639	Spain	*4,099
Chile (1913)	*5,092	Sweden	3,489
China (Peking-Mukden Line)	*2,516	Switzerland	10,575
Cuba (1911)	*3,430	Union of South Africa	5,193
Denmark	10,192	United Kingdom	*16,863
Egypt	7,619		

NET OPERATING REVENUE PER MILE OF LINE.

1912.

United States	$3,514	France (1911)	$5,437
		Germany	7,166
Algeria and Tunis (1911)	1,732	Holland	*4,107
Argentine	*2,325	Hungary	3,148
Australia	1,951	India	3,050
New South Wales	2,974	Italy	2,224
Queensland	1,310	Japan	*5,636
South Australia	2,652	Mexico (National Railways)	1,910
Victoria	2,623	New Zealand	2,170
Western Australia	1,066	Norway	941
Austria	4,073	Portugal (1910)	*3,595
Belgium	7,259	Roumania	3,490
Brazil (1911)	*972	Russia (1910)	*4,076
Bulgaria (1911)	1,668	Siam	1,615
Canada	2,570	Spain	*4,452
Chile (1913)	*639	Sweden	1,486
China (Peking-Mukden Line)	*6,165	Switzerland	5,370
Cuba (1911)	*2,278	Union of South Africa	2,803
Denmark	1,949	United Kingdom	*9,826
Egypt	5,405		

* Computed by Bureau of Railway Economics.

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OPERATING RATIO.

1912.

	Per cent.
United States	69.3
Algeria and Tunis (1911)	*63.00
Argentine	*63.10
Australia	65.29
New South Wales	64.23
Queensland	63.22
South Australia	61.89
Victoria	63.43
Western Australia	71.31
Austria	74.62
Belgium	69.33
Brazil (1911)	*86.73
Bulgaria (1911)	62.97
Canada	68.7
Chile (1913)	*88.85
China (Peking-Mukden Line)	28.9
Cuba (1911)	*60.09
Denmark	*83.94
Egypt	*58.50
France (1911)	62.6
Germany	67.47
Holland	*69.44
Hungary	63.89
India	48.92
Italy	*83.96
Japan	*46.30
Mexico (National Railways)	62.55
New Zealand	68.13
Norway	75.5
Portugal (1910)	*50.34
Roumania	64.49
Russia (1910)	*67.19
Siam	37.99
Spain	*47.93
Sweden	70.13
Switzerland	66.32
Union of South Africa	65.0
United Kingdom	63.

AVERAGE YEARLY COMPENSATION PER EMPLOYEE.

1912.

Based on *average number* of employees during year:

Australia:	
New South Wales	*$573.45
Western Australia	*770.52
Germany	*404.23
Holland	*334.48
Italy	354.43
Japan	*113.88
New Zealand	*632.16
Sweden	409.
Switzerland	*366.96

Based on *number* of employees at *end of year:*

United States	*$729.64
Australia:	
Victoria	*608.52
Austria	*329.88
Canada	*604.47
Hungary	*300.41
Roumania	*249.40
Russia (1910)	*211.40

* Computed by Bureau of Railway Economics.

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DISTRIBUTION OF PASSENGERS CARRIED, BY CLASSES.*

1912.

(Total for each country = 100.0.)

	Per cent.
United States	....
Australia:	
New South Wales:	
1st class	6.9
2nd class	36.4
Season tickets	32.9
Weekly tickets	23.8
South Australia:	
1st class	9.0
2nd class	46.4
Season tickets	37.3
Weekly tickets	7.3
Victoria:	
1st class	49.1
2nd class	50.9
Western Australia:	
1st class	10.4
2nd class	46.1
Season tickets	29.4
Workers' tickets	14.1
Austria:	
1st class	0.4
2nd class	5.9
3rd class	92.6
Military	1.1
Belgium:	
1st class	0.9
2nd class	10.3
3rd class	87.8
Electric line	1.0
Brazil (1911):	
1st class	33.2
2nd class	66.8
Bulgaria (1911):	
1st class	0.4
2nd class	6.3
3rd class	93.3
Denmark:	
1st class	0.1
2nd class	8.9
3rd class	91.0
France (1911):	
1st class	4.1
2nd class	19.6
3rd class	76.3
Germany:	
1st class	0.1
2nd class	7.5
3rd class	42.0
4th class	49.2
Military	1.2
Holland:	
1st class	4.1
2nd class	24.5
3rd class	69.3
4th class	0.4
Military	1.7
Hungary:	
1st class	1.1
2nd class	14.6
3rd class	82.2
Military	2.1
India:	
1st class	0.2
2nd class	0.8
Intermediate	2.6
3rd class	90.0
Season and vendors' tickets	6.4
Japan:	
1st class	0.3
2nd class	4.6
3rd class	95.1
New Zealand:	
1st class	15.5
2nd class	84.5
Roumania:	
1st class	3.9
2nd class	15.0
3rd class	79.6
Military	1.5
Siam:	
1st class	0.3
2nd class	1.3
3rd class	98.4
Sweden:	
1st class	0.1
2nd class	4.9
3rd class	93.8
Military	1.2
Switzerland:	
1st class	0.5
2nd class	6.9
3rd class	86.9
Special class	5.7
United Kingdom:	
1st class	2.3
2nd class	1.2
3rd class	96.5

* Percentages computed by Bureau of Railway Economics.

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DISTRIBUTION OF PASSENGER REVENUE, BY CLASSES.*

1912.

(Total for each country = 100.0.)

	Per cent.
United States	....
Australia:	
New South Wales:	
1st class	28.6
2nd class	54.1
Season tickets	13.1
Weekly tickets	4.2
Victoria:	
1st class	45.1
2nd class	54.9
Western Australia:	
1st class	28.2
2nd class	58.4
Season tickets	10.2
Workers' tickets	3.2
Austria:	
1st class	3.6
2nd class	16.2
3rd class	78.3
Military	1.9
Denmark:	
1st class	1.5
2nd class	20.8
3rd class	77.7
France (1911):	
1st class	15.0
2nd class	24.1
3rd class	59.6
Miscellaneous	1.3
Germany:	
1st class	2.9
2nd class	16.6
3rd class	43.7
4th class	35.0
Military	1.8
Holland:	
1st class	10.4
2nd class	34.0
3rd class	53.0
4th class	0.2
Military	2.4
India:	
1st class	3.2
2nd class	4.3
Intermediate	4.7
3rd class	86.9
Season and vendors' tickets	0.9
Japan:	
1st class	2.2
2nd class	14.1
3rd class	83.7
Roumania:	
1st class	11.9
2nd class	27.0
3rd class	59.2
Military	1.9
Siam:	
1st class	1.6
2nd class	4.3
3rd class	94.1
Switzerland:	
1st class	5.9
2nd class	24.2
3rd class	65.8
Special class	4.1
United Kingdom:	
1st class	9.3
2nd class	3.0
3rd class	87.7

* Percentages computed by Bureau of Railway Economics.

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PASSENGER-MILES PER MILE OF LINE.

(Passenger density.)

1912.

United States	136,699	France (1911)	432,630
		Germany	678,385
Australia:		Holland	*583,155
New South Wales	*287,204	Hungary	236,556
South Australia	*145,995	India	*457,498
Austria	363,415	Japan	*706,884
Belgium	*1,046,614	Mexico (National Railways)	78,344
Brazil (1911)	*70,963	Norway	131,114
Bulgaria (1911)	*121,216	Roumania	250,637
Canada	108,888	Russia (1910)	*359,268
China (Peking-Mukden Line)	*359,002	Siam	*126,767
Cuba (1911)	*62,216	Spain (1909)	139,736
Denmark	405,338	Sweden	123,972
		Switzerland	520,666

PASSENGER REVENUE PER MILE OF LINE.

1912.

United States	$2,704	Egypt	*$6,059
		France (1911)	4,707
Algeria and Tunis (1911)	*1,644	Germany	6,147
Australia:		Holland	*5,948
New South Wales	3,009	Hungary	2,260
Queensland	1,007	India	*1,895
South Australia	*1,962	Italy	4,854
Victoria	*3,169	Japan	5,324
Western Australia	1,047	Mexico (National Railways)	*1,124
Austria	3,858	New Zealand	*2,505
Belgium	*7,347	Portugal (1910)	*2,910
Brazil (1911)	*1,720	Roumania	3,637
Bulgaria (1911)	*1,766	Siam	*1,511
Canada	*2,116	Spain	*2,294
China (Peking-Mukden Line)	*3,462	Sweden	*1,536
Cuba (1911)	*1,785	Switzerland	6,666
Denmark	5,169	United Kingdom	9,183

* Computed by Bureau of Railway Economics.

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AVERAGE RECEIPTS PER PASSENGER.

1912.

United States	$0.657	Egypt	*$0.313
		France (1911)	*0.233
Algeria and Tunis (1911)	*0.603	Germany	*0.129
Australia:		Holland	*0.166
New South Wales	*0.162	Hungary	0.185
Queensland	*0.244	India	*0.152
South Australia	*0.156	Italy	*0.455
Victoria	*0.108	Japan	0.15
Western Australia	*0.158	Mexico (National Railways)	0.834
Austria	0.189	New Zealand	*0.487
Belgium	0.103	Portugal (1910)	*0.297
Brazil (1911)	*0.383	Roumania	0.647
Bulgaria (1911)	*0.607	Siam	0.360
Canada	1.375	Spain	*0.378
China (Peking-Mukden Line)	*0.600	Sweden	0.212
Cuba (1911)	*0.529	Switzerland	0.162
Denmark	0.275	United Kingdom	0.148

AVERAGE RECEIPTS PER PASSENGER-MILE.

1912.

	Cents.		Cents.
United States	1.987	Germany	0.908
		Holland	*1.020
Algeria and Tunis (1911)	1.466	Hungary	0.967
Australia:		India	0.414
New South Wales	1.048	Japan	0.69
South Australia	1.318	Mexico (National Railways)	1.435
Austria	1.062	Norway	1.208
Brazil (1911)	*2.424	Roumania	1.451
Bulgaria (1911)	*1.457	Russia (1910)	0.699
Canada	1.943	Siam	1.188
China (Peking-Mukden Line)	*0.964	Spain (1909)	1.522
Cuba (1911)	*2.868	Sweden	1.246
Denmark	1.294	Switzerland	1.280
France (1911)	1.075		

AVERAGE JOURNEY PER PASSENGER.

1912.

	Miles.		Miles.
United States	33.2	France (1911)	21.4
		Germany	14.2
Algeria and Tunis (1911)	34.4	Holland	*16.3
Australia:		Hungary	19.1
New South Wales	15.4	India	36.7
South Australia	11.6	Japan	22.6
Austria	17.8	Mexico (National Railways)	58.1
Belgium	14.9	Norway	15.8
Brazil (1911)	*15.8	Roumania	*44.5
Bulgaria (1911)	41.7	Russia (1910)	*74.0
Canada	71.0	Siam	30.0
China (Peking-Mukden Line)	*62.2	Spain (1909)	*22.8
Cuba (1911)	*18.4	Sweden	17.1
Denmark	21.6	Switzerland	12.7

* Computed by Bureau of Railway Economics.

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PASSENGERS PER TRAIN.

1912.

United States	53	France (1911)	*69
		Germany	*84
Australia:		Holland	*63
New South Wales	*109	Hungary	*66
South Australia	*82	India	*176
Austria	*73	Japan	*111
Belgium	*99	Mexico (National Railways)	*86
Canada	62	Roumania	*76
Denmark	53	Switzerland	*69

TON-MILES PER MILE OF LINE.

(Freight density.)

1912.

United States	1,078,580	Holland	*507,637
		Hungary	494,002
Australia:		India	*522,758
South Australia	*256,139	Japan	*587,610
Austria	752,767	Mexico (National Railways)	263,950
Brazil (1911)	*72,047	Norway	129,524
Canada	731,776	Roumania	445,523
China (Peking-Mukden Line)	*553,383	Russia (1910)	*1,033,254
Cuba (1911)	*108,154	Siam	*67,083
Denmark	293,900	Spain (1909)	240,166
France (1911)	631,736	Sweden	229,468
Germany	1,117,376	Switzerland	326,887
		Union of South Africa	*296,406

FREIGHT REVENUE PER MILE OF LINE.

1912.

United States	$7,962	France (1911)	$7,459
		Germany	13,898
Algeria and Tunis (1911)	*2,981	Holland	*6,293
Australia	*3,199	Hungary	5,995
New South Wales	4,759	India	*3,672
Queensland	2,279	Italy	7,581
South Australia	4,487	Japan	*4,780
Victoria	*3,443	Mexico (National Railways)	3,586
Western Australia	2,273	New Zealand	*3,697
Austria	11,237	Norway	2,066
Belgium[a]	*14,440	Portugal (1910)	*4,329
Brazil (1911)	*4,981	Roumania	5,807
Bulgaria (1911)	*2,465	Siam	*1,012
Canada	*5,539	Spain	*6,149
China (Peking-Mukden Line)	*4,510	Sweden	3,154
Cuba (1911)	*3,184	Switzerland	8,629
Denmark	6,264	Union of South Africa	*5,435
Egypt	*6,764	United Kingdom	13,295

* Computed by Bureau of Railway Economics.
a Does not cover live stock.

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AVERAGE RECEIPTS PER TON.

1912.

United States	$1.066	France (1911)	*$0.925
		Germany	*0.769
Algeria and Tunis (1911)	*1.276	Holland	*0.674
Australia	*1.853	Hungary	0.873
New South Wales	*1.480	India	*1.399
Queensland	*2.413	Italy	*1.556
South Australia	*2.102	Japan	0.67
Victoria	*2.056	Mexico (National Railways)	3.018
Western Australia	*1.973	New Zealand	*1.501
Austria	0.978	Norway	*0.554
Belgium[a]	0.536	Portugal (1910)	*1.233
Brazil (1911)	*5.538	Roumania	*1.311
Bulgaria (1911)	*1.035	Siam	1.904
Canada	1.655	Spain	*1.559
China (Peking-Mukden Line)	*0.707	Sweden	1.117
Cuba (1911)	*0.774	Switzerland	*1.202
Denmark	1.14	Union of South Africa	*3.139
Egypt	*1.916	United Kingdom[a]	*0.523

AVERAGE RECEIPTS PER TON-MILE.

1912.

	Cents.		Cents.
United States	0.744	Holland	*1.240
		Hungary	1.215
Algeria and Tunis (1911)	1.691	India	0.703
Australia:		Japan	0.814
New South Wales	1.611	Mexico (National Railways)	1.359
South Australia	1.756	Norway	1.448
Austria	1.494	Roumania	1.297
Brazil (1911)	*6.914	Russia (1910)	0.933
Canada	0.757	Siam	1.505
China (Peking-Mukden Line)	*0.815	Spain (1909)	2.226
Cuba (1911)	*2.944	Sweden	1.373
Denmark	2.113	Switzerland	2.640
France (1911)	1.181	Union of South Africa	*1.834
Germany	1.244		

AVERAGE HAUL PER TON.

1912.

	Miles.		Miles.
United States	256.9	Germany	61.8
		Holland	*55.2
Algeria and Tunis (1911)	73.8	Hungary	71.8
Australia:		India	199.2
New South Wales	81.1	Japan	92.6
South Australia	120.1	Mexico (National Railways)	222.1
Austria	65.5	Norway	34.7
Belgium	52.3	Roumania	99.8
Brazil (1911)	*80.1	Russia (1910)	*160.1
Canada	218.0	Siam	126.2
China (Peking-Mukden Line)	*86.8	Spain (1909)	*60.9
Cuba (1911)	*26.3	Sweden	45.8
Denmark	53.5	Switzerland	45.5
France (1911)	78.4	Union of South Africa	*171.2

* Computed by Bureau of Railway Economics.
[a] Does not cover live stock.

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TONS PER TRAIN.

1912.

	Tons.		Tons.
United States	406.8	Germany	*240.3
		Holland	*137.1
Australia:		India	*184.4
South Australia	*109.6	Japan	110.7
Austria	*180.5	Mexico (National Railways)	*224.1
Canada	*325.3	Roumania	*143.7
France (1911)	*141.7	Switzerland	*132.8

AVERAGE CARRYING CAPACITY PER FREIGHT CAR.

1912.

	Tons.		Tons.
United States	37.0	Holland	*13.3
		Hungary	*13.4
Australia:		Italy	17.0
New South Wales[a]	*12.1	Japan	*9.2
Austria	*14.2	Mexico (National Railways)	*34.8
Belgium	14.1	New Zealand	*9.1
China (Peking-Mukden Line)	*22.7	Spain (1909)	11.8
France (1911)	13.9	Sweden	*13.9
Germany	*15.7	Switzerland	*13.6

TRAIN-MILES PER MILE OF LINE.

(Train density.)

1912.

United States	*4,950	Germany	*12,454
		Holland	*12,888
Algeria and Tunis (1911)	*2,859	Hungary	*6,100
Australia	*3,339	India	*4,562
New South Wales	*4,875	Italy	*8,356
Queensland	2,492	Japan	*10,525
South Australia	*4,127	Mexico (National Railways)	*1,859
Victoria	*3,905	New Zealand	*3,175
Western Australia	*2,115	Norway	3,655
Austria	*8,492	Roumania	*5,901
Belgium	*18,827	Siam	*1,901
Bulgaria (1911)	*2,804	Spain (1909)	*4,458
Canada	*3,776	Sweden	4,010
China (Peking-Mukden Line)	*3,751	Switzerland	10,048
Denmark	7,157	Union of South Africa	*3,707
Egypt	*7,004	United Kingdom	*17,598
France (1911)	*9,764		

* Computed by Bureau of Railway Economics.
a Covers work cars.

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AVERAGE RECEIPTS PER TRAIN-MILE.*

1912.

United States	$2.24	France (1911)	$1.46
		Germany	1.65
Algeria and Tunis (1911)	1.62	Holland	0.95
Australia	1.71	Hungary	1.37
New South Wales	1.68	India	1.27
Queensland	1.43	Italy	1.49
South Australia	1.65	Japan	0.96
Victoria	1.80	Mexico (National Railways)	2.64
Western Australia	1.66	New Zealand	2.07
Austria	1.80	Roumania	1.61
Belgium	1.25	Siam	1.34
Bulgaria (1911)	1.54	Spain (1909)	1.61
Canada	2.13	Sweden	1.21
China (Peking-Mukden Line)	2.13	Switzerland	1.52
Denmark	1.57	Union of South Africa	2.11
Egypt	1.83	United Kingdom	1.40

* Computed by Bureau of Railway Economics.

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Summary of Railway Returns

for the

Fiscal Year Ending June 30,

1915

Consecutive No. 88
Miscellaneous Series No. 22
WASHINGTON, D. C.
1916

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BULLETINS OF THE
BUREAU OF RAILWAY ECONOMICS

MONTHLY BULLETINS

The monthly summary of Revenues and Expenses of Steam Roads in the United States has been issued regularly since July, 1910.

Following is the list of bulletins for the last twelve months:

Consecutive Number.	Monthly Report Series.	Month of—
72.	55.	December, 1914.
74.	56.	January, 1915.
76.	57.	February, 1915.
77.	58.	March, 1915.
78.	59.	April, 1915.
79.	60.	May, 1915.
80.	61.	June, 1915.—Insert with Bulletin—Operating Returns: Fiscal Years Ending June 30, 1914 and 1915.
82.	62.	July, 1915.
84.	63.	August, 1915.
85.	64.	September, 1915.
86.	65.	October, 1915.
87.	66.	November, 1915.

Unnumbered Compilation:

Number of Stockholders and Average Amount of Stock per Stockholder: Railways of the United States, June 30, 1914.

The following issues are out of print:

Consecutive Number.	Monthly Report Series.	Month of—
7.	5.	October, 1910.
9.	7.	December, 1910.
13.	10.	March, 1911.
19.	13.	June, 1911.
22.	15.	August, 1911.
51.	37.	June, 1913.

(Continued to page 3 of cover.)

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Summary of Railway Returns

for the

Fiscal Year Ending June 30,

1915

(Compiled from Reports to the
Interstate Commerce Commission.)

Bureau of Railway Economics
Washington, D. C.
January, 1916

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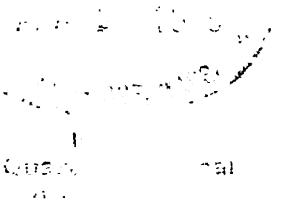

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INTRODUCTION.

This Bulletin is the first in a series of proposed annual publications which aims to present as soon as possible after the close of the fiscal year the significant statistics of the more important railway systems, compiled from their annual reports to the Interstate Commerce Commission. These annual reports, embracing statistics of railway operation and finance for the year ending June 30, are required by law to be filed with the Commission within three months thereafter, unless additional time is granted by the Commission. So many changes have been made year after year in the form and content of reports that delays in filing beyond September 30 have been frequent. The variations of the report for 1915 from previous forms are so extensive that the delays this year have been serious. Nevertheless the Bureau will make every effort, as it has done this year, to issue its summary as soon after January 1st as possible.

The designations "Eastern district," "Southern district," and "Western district" throughout the summary indicate territorial divisions as follows: Eastern district comprises roads in the region extending from the Atlantic seaboard north of the Potomac and Ohio rivers to a western boundary constituted of Lake Michigan, a line drawn from Chicago through Peoria to St. Louis, and the Mississippi river from St. Louis to Cairo. The Southern district comprises the roads east of the Mississippi and south of the Ohio and Potomac rivers. The Western district comprises roads in the region extending west from Lake Michigan, a line drawn from Chicago through Peoria to St. Louis, and the Mississippi river from St. Louis to the Gulf. Roads lying in more than one of these districts are assigned to that district in which lies the larger portion of their mileage.

For purposes of convenience and of significance in presentation, the Commission divides the carriers into three classes, those having annual operating revenues in excess of $1,000,000 (Class I), those between $1,000,000 and $100,000 (Class II), and those below $100,000 (Class III). The returns of roads of Class III have been so incomplete, or so defective in many instances, that beginning with the year 1913 the Commission has omitted such roads from the majority of its statistical summaries. This bulletin confines itself

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to carriers of Class I, with annual operating revenues in excess of $1,000,000. This class includes approximately 89 per cent of the entire railway mileage of the country and 97 per cent of the operating revenues. In view of the fact that this is intended merely as a preliminary abstract which shall portray the general trend of railway operations during the year, it is felt that a summary representing so large a proportion of the country's mileage and earnings is adequate for the purpose, and that the more exhaustive tabulation necessary to include the roads of Class II would not modify the results sufficiently to warrant the additional labor and delay.

To bring this summary into harmony with Commission practice, all switching and terminal companies are omitted from the tabulations. For this reason the aggregate operating figures are not identical with those that would be obtained from an accumulation of the monthly returns to the Commission; in the latter the switching and terminal companies of Class I are included.

It is important to keep constantly in mind the limitations of a bulletin of this character, which simply transcribes and aggregates the statistics of the large operating roads as they are officially filed. No account is taken of operating roads having annual revenues of $1,000,000 or less, which file operating reports with the Commission. Neither is any account taken of non-operating subsidiaries, such as leased lines, which file separate corporate reports with the Commission showing balance-sheet assets and liabilities, income accounts, and the like. It is therefore impossible to present anything in the form of a consolidated balance sheet, income account, or profit-and-loss account such as will be found in the final report of the Commission, in which the smaller carriers and the non-operating roads are included.

Furthermore, no account is taken of intercorporate duplications arising out of the relations between the operating roads of Class I on the one hand, included in this bulletin, and the smaller operating roads and the non-operating companies on the other hand, not here included. The result is that from the standpoint of intercorporate relations no *net* figures are possible; the aggregates here presented are *gross* figures throughout. Thus it is impracticable to present a figure of net railway capitalization that would represent only the liability for the property actually used in railway service, for duplications arising from the intercorporate ownership of railway securities cannot be eliminated without considering all other roads.

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For the same reason it is impossible to eliminate duplications arising from intercorporate payments in the way of hire of equipment, rentals, interest, dividends, and the like, and hence to present a consolidated income account for the railways as a system. However, it is believed that the gross figures are of sufficient value in themselves to warrant this preliminary tabulation.

Certain tabulations, notably that relating to compensation of employees, will be found to be scanty and incomplete. This is because changes in statistical and accounting regulations of the Commission, effective for the first time this year, have resulted in difficulties of adjustment in railway accounting offices, and have produced results of little or no value during the first year's operation of the new requirements. Furthermore, these changes render it difficult, in many cases impracticable, to compare the returns for 1915 with corresponding returns for previous years. Attention is called to this fact in connection with certain items of the income account on pages 14 and 15, the only table in which a comparison with the preceding year is attempted. The aggregates of capital stock and funded debt, pages 12 and 13, are not comparable with corresponding aggregates for previous years, principally because under the new accounting rules the returns for 1915 of securities actually outstanding exclude securities held in the treasury or in sinking funds, and securities pledged as collateral. In various other accounts, also, the comparability of the returns for 1915 with those of preceding years has been impaired by accounting changes, and hence no comparisons have been attempted.

Emphasis is laid upon the fact that these figures are in no sense official. They are preliminary and tentative. They have not as yet been subjected to the rigorous tests administered by the Commission; they are in some cases liable to correction and adjustment by the carriers before they receive their final official approval. No attempt is made to point out the significance of any of the tables. The summary is issued as soon after the filing of the reports as the requirements of accurate tabulation permit, in response to a widespread desire for early information as to the results of railway operation and management during the fiscal year just closed.

The first table following presents the names and operated mileage of the 170 railways covered by the summaries of this bulletin, listed according to districts. The tables next following give the significant statistics for the combined railways of each district, and of the United States as a whole.

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MILES OF LINE OPERATED JUNE 30, 1915: INDIVIDUAL RAILWAYS.

(Railways having annual operating revenues above $1,000,000.)

Name of road.	Miles of line operated June 30, 1915.
EASTERN DISTRICT:	
Ann Arbor R. R.	300.90
Atlantic & St. Lawrence R. R.	166.70
Atlantic City R. R.	170.19
Baltimore & Ohio R. R.	4,535.27
Baltimore, Chesapeake & Atlantic Ry.	87.61
Bangor & Aroostook R. R.	631.56
Bessemer & Lake Erie R. R.	213.46
Boston & Maine R. R.	2,301.90
Buffalo & Susquehanna R. R. Corporation	252.56
Buffalo, Rochester & Pittsburgh Ry.	586.48
Canadian Pacific Ry. (Lines in Maine)	233.30
Central New England Ry.	303.66
Central R. R. of New Jersey	680.65
Central Vermont Ry.	411.20
Chicago & Eastern Illinois R. R.	1,282.41
Chicago & Erie R. R.	269.56
Chicago, Detroit & Canada Grand Trunk Junction R. R.	60.00
Chicago, Indianapolis & Louisville Ry.	622.41
Chicago, Terre Haute & Southeastern Ry.	374.01
Cincinnati, Hamilton & Dayton Ry.	1,002.70
Cincinnati Northern R. R.	245.72
Cleveland, Cincinnati, Chicago & St. Louis Ry.	2,381.24
Cumberland Valley R. R.	163.65
Delaware & Hudson Co.	885.63
Delaware, Lackawanna & Western R. R.	958.63
Detroit & Mackinac Ry.	392.90
Detroit & Toledo Shore Line R. R.	78.95
Detroit, Grand Haven & Milwaukee Ry.	190.52
Detroit, Toledo & Ironton R. R.	441.29
Elgin, Joliet & Eastern Ry.	780.70
Erie R. R.	1,987.84
Grand Rapids & Indiana Ry.	575.03
Grand Trunk Western Ry.	347.05
Hocking Valley Ry.	351.10
Lake Erie & Western R. R.	900.01
Lehigh & Hudson River Ry.	96.60
Lehigh & New England R. R.	295.97
Lehigh Valley R. R.	1,442.36
Long Island R. R.	397.62
Maine Central R. R.	1,220.18
Michigan Central R. R.	1,800.04
Monongahela R. R.	74.94
New York Central Lines	5,969.40
New York, Chicago & St. Louis R. R.	568.57
New York, New Haven & Hartford R. R.	2,004.58
New York, Ontario & Western Ry.	568.46
New York, Philadelphia & Norfolk R. R.	112.00
New York, Susquehanna & Western R. R.	140.14
Pennsylvania Company	1,757.47
Pennsylvania R. R.	4,527.81
Pere Marquette R. R.	2,322.38
Philadelphia & Reading Ry.	1,119.75
Philadelphia, Baltimore & Washington R. R.	717.07
Pittsburgh & Lake Erie R. R.	224.91

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MILES OF LINE OPERATED JUNE 30, 1915: INDIVIDUAL RAILWAYS.

(Railways having annual operating revenues above $1,000,000.)

Name of road.	Miles of line operated June 30, 1915.
EASTERN DISTRICT (continued):	
Pittsburgh, Cincinnati, Chicago & St. Louis Ry	1,478.75
Pittsburg, Shawmut & Northern R. R	294.08
Port Reading R. R	21.16
Rutland R. R	468.11
Staten Island Rapid Transit Ry	10.89
Toledo & Ohio Central Ry	435.63
Toledo, St. Louis & Western R. R	455.04
Ulster & Delaware R. R	128.88
Vandalia R. R	910.05
Wabash R. R	2,519.06
Western Maryland Ry	661.23
West Jersey & Seashore R. R	358.39
Wheeling & Lake Erie R. R	512.13
Total—Eastern District	58,780.44
SOUTHERN DISTRICT:	
Alabama & Vicksburg Ry	151.61
Alabama Great Southern R. R	309.41
Atlanta & West Point R. R	92.99
Atlanta, Birmingham & Atlantic R. R	638.45
Atlantic Coast Line R. R	4,697.63
Carolina, Clinchfield & Ohio Ry	248.23
Central of Georgia Ry	1,924.09
Charleston & Western Carolina Ry	342.50
Chesapeake & Ohio Ry	2,371.69
Cincinnati, New Orleans & Texas Pacific Ry	337.27
Florida East Coast Ry	744.76
Georgia R. R. Lessee Organization	306.28
Georgia Southern & Florida Ry	395.00
Gulf & Ship Island R. R	307.56
Illinois Central R. R	4,767.14
Kanawha & Michigan Ry	176.60
Louisville & Nashville R. R	5,037.12
Louisville, Henderson & St. Louis Ry	199.80
Mobile & Ohio R. R	1,122.48
Nashville, Chattanooga & St. Louis Ry	1,230.76
New Orleans & Northeastern R. R	227.14
New Orleans Great Northern R. R	284.60
New Orleans, Mobile & Chicago R. R	402.90
Norfolk & Western Ry	2,043.59
Norfolk Southern R. R	900.04
Richmond, Fredericksburg & Potomac R. R	87.68
Seaboard Air Line Ry	3,123.14
Southern Ry	7,022.15
Southern Ry. in Mississippi	280.61
Tennessee Central R. R	293.71
Virginia & Southwestern Ry	240.14
Virginian Ry	504.15
Washington Southern Ry	35.57
Western Ry. of Alabama	133.07
Yazoo & Mississippi Valley R. R	1,381.87
Total—Southern District	42,361.73

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MILES OF LINE OPERATED JUNE 30, 1915: INDIVIDUAL RAILWAYS.

(Railways having annual operating revenues above $1,000,000.)

Name of road.	Miles of line operated June 30, 1915.
WESTERN DISTRICT:	
Arizona Eastern R. R.	377.74
Atchison, Topeka & Santa Fe Ry	8,513.48
Bingham & Garfield Ry	26.87
Chicago & Alton R. R.	1,052.49
Chicago & Northwestern Ry	8,107.82
Chicago, Burlington & Quincy R. R.	9,365.94
Chicago Great Western R. R.	1,427.10
Chicago, Milwaukee & St. Paul Ry	10,075.61
Chicago, Peoria & St. Louis R. R.	255.47
Chicago, Rock Island & Gulf Ry	476.75
Chicago, Rock Island & Pacific Ry	7,854.54
Chicago, St. Paul, Minneapolis & Omaha Ry	1,752.81
Colorado & Southern Ry	1,088.80
Colorado Midland Ry	337.64
Cripple Creek & Colorado Springs R. R.	86.65
Denver & Rio Grande R. R.	2,576.75
Denver & Salt Lake R. R.	255.46
Duluth & Iron Range R. R.	272.91
Duluth, Missabe & Northern Ry.	370.01
Duluth, South Shore & Atlantic Ry	626.36
Duluth, Winnipeg & Pacific Ry	178.94
El Paso & Southwestern Co.	1,027.08
Fort Worth & Denver City Ry	454.14
Galveston, Harrisburg & San Antonio Ry	1,351.21
Great Northern Ry	8,102.17
Gulf, Colorado & Santa Fe Ry	1,937.71
Houston & Texas Central R. R.	894.63
Houston, East & West Texas Ry	190.94
International & Great Northern Ry	1,159.50
Kansas City, Mexico & Orient Ry	737.13
Kansas City Southern Ry	836.51
Louisiana & Arkansas Ry	278.72
Louisiana Ry. & Navigation Co.	350.58
Louisiana Western R. R.	207.74
Midland Valley R. R.	380.29
Minneapolis & St. Louis R. R.	1,646.47
Minneapolis, St. Paul & Sault Ste. Marie Ry	4,103.48
Missouri & North Arkansas R. R.	365.24
Missouri, Kansas & Texas Lines	3,865.07
Missouri, Oklahoma & Gulf Ry	334.37
Missouri Pacific Ry	3,930.82
Morgan's Louisiana & Texas R. R. & S. S. Co.	404.53
Nevada Northern Ry	165.10
New Orleans, Texas & Mexico R. R.	285.87
Northern Pacific Ry	6,653.98
Northwestern Pacific R. R.	417.46
Oregon Short Line R. R.	2,181.39
Oregon-Washington R. R. & Navigation Co	2,027.35
Panhandle & Santa Fe Ry	670.33
St. Joseph & Grand Island Ry	257.93
St. Louis & San Francisco R. R.	4,748.70
St. Louis, Brownsville & Mexico Ry	548.18
St. Louis, Iron Mountain & Southern Ry	3,362.62
St. Louis, San Francisco & Texas Ry	243.59

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MILES OF LINE OPERATED JUNE 30, 1915: INDIVIDUAL RAILWAYS.

(Railways having annual operating revenues above $1,000,000.)

Name of road.	Miles of line operated June 30, 1915.
WESTERN DISTRICT (continued):	
St. Louis Southwestern Ry	943.33
St. Louis Southwestern Ry. Co. of Texas	810.50
San Antonio & Aransas Pass Ry	726.56
San Pedro, Los Angeles & Salt Lake R. R	1,131.64
Southern Pacific Co	6,516.81
Spokane International Ry	163.40
Spokane, Portland & Seattle Ry	554.74
Texas & New Orleans R. R	468.14
Texas & Pacific Ry	1,943.93
Toledo, Peoria & Western Ry	247.70
Trinity & Brazos Valley Ry	315.41
Union Pacific R. R	3,617.40
Vicksburg, Shreveport & Pacific Ry	183.31
Western Pacific Ry	946.38
Total—Western District	127,770.22
UNITED STATES	228,912.39

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MILEAGE, CAPITAL SECURITIES, EQUIPMENT IN SERVICE.

(Railways having annual operating revenues above $1,000,000.)

Item.	United States.	Eastern District
MILEAGE—June 30, 1915:		
Miles of line owned—single track	171,961.71	33,505.
Miles operated—single track	228,912.39	58,780.
Miles operated—main track	262,361.17	79,398.
Miles operated—yard track and sidings	94,997.27	38,830.
Miles operated—all track	357,358.44	118,229.
Average mileage operated—single track	228,330.64	58,705.
CAPITAL SECURITIES—Outstanding June 30, 1915: *a*		
Stock;		
Common	$5,385,863,735	$2,129,490,1
Second preferred	218,616,584	134,356,4
First preferred	1,200,303,579	217,038,6
Debenture	9,927,350	83,5
Total stock	$6,814,711,248	$2,480,968,81
Funded debt;		
Equipment obligations	$353,425,375	$203,113,8
Mortgage bonds	6,551,452,937	2,137,084,8
Collateral trust bonds	1,095,537,092	408,268,64
Income bonds	217,595,623	28,211,55
Miscellaneous obligations	1,045,196,663	582,043,73
Receipts outstanding	271,750	1,00
Total funded debt	$9,263,479,440	$3,358,723,68
Total capital securities	$16,078,190,688	$5,839,692,50
EQUIPMENT IN SERVICE—June 30, 1915:		
Steam locomotives	61,838	28,13
Other locomotives	279	26
Freight train cars	2,286,596	1,099,84
Passenger train cars	52,673	26,04
Coaches	28,254	14,82
Other passenger train cars	24,419	11,21
Company service cars	93,403	32,470
All cars in service	2,432,672	1,158,356
Number of cars of steel construction;		
Freight cars	501,309	332,28
Passenger coaches	6,014	3,68
Other passenger cars	4,821	2,18
Total cars (steel)	512,144	338,153
Number of cars of steel underframe construction;		
Freight cars	672,121	363,875
Passenger coaches	1,671	77
Other passenger cars	2,478	93
Total cars (steel underframe)	676,270	365,582

Duplications resulting from intercorporate relations not excluded.

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MILEAGE, CAPITAL SECURITIES, EQUIPMENT IN SERVICE.

(Railways having annual operating revenues above $1,000,000.)

Southern District.	Western District.	Item.
		MILEAGE—June 30, 1915:
33,155.64	105,301.03	Miles of line owned—single track.
42,361.73	127,770.22	Miles operated—single track.
46,095.98	136,867.11	Miles operated—main track.
15,222.23	40,944.05	Miles operated—yard track and sidings.
61,318.21	177,811.16	Miles operated—all track.
42,311.95	127,313.67	Average mileage operated—single track.
		CAPITAL SECURITIES—Outstanding June 30, 1915: *a*
		Stock;
$794,745,560	$2,461,628,032	Common.
36,772,600	47,487,547	Second preferred.
145,722,701	837,542,190	First preferred.
6,150,600	3,693,200	Debenture.
$983,391,461	$3,350,350,969	Total stock.
		Funded debt;
$73,372,830	$76,938,672	Equipment obligations.
1,110,359,624	3,304,008,434	Mortgage bonds.
161,790,500	525,477,950	Collateral trust bonds.
81,076,627	108,307,441	Income bonds.
22,338,118	440,814,812	Miscellaneous obligations.
.....	270,750	Receipts outstanding.
$1,448,937,699	$4,455,818,059	Total funded debt.
$2,432,329,160	$7,806,169,028	Total capital securities.
		EQUIPMENT IN SERVICE—June 30, 1915:
10,062	23,641	Steam locomotives.
10	8	Other locomotives.
390,349	787,401	Freight train cars.
6,885	19,748	Passenger train cars.
3,658	9,769	Coaches.
3,227	9,979	Other passenger train cars.
14,110	46,823	Company service cars.
420,344	853,972	All cars in service.
		Number of cars of steel construction;
88,422	80,607	Freight cars.
362	1,966	Passenger coaches.
407	2,227	Other passenger cars.
89,191	84,800	Total cars (steel).
		Number of cars of steel underframe construction;
112,655	195,591	Freight cars.
365	530	Passenger coaches.
531	1,016	Other passenger cars.
113,551	197,137	Total cars (steel underframe).

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INCOME ACCOUNT *a*.

(Railways having annual operating revenues above $1,000,000.)

Item.	Amount 1915.	Amount 1914.	Increase 1915 over 1914.
UNITED STATES.			
Railway operating revenues	$2,870,913,815	$3,029,914,285	*d* $159,000,470
Railway operating expenses	2,020,823,953	2,202,782,882	*d* 181,958,929
Net operating revenue	850,089,862	827,131,403	22,958,459
Railway tax accruals	133,219,085	135,730,764	*d* 2,511,679
Uncollectible railway revenues	649,921	28,381	621,540
Railway operating income	716,220,856	691,372,258	24,848,598
Miscellaneous operating income	1,874,357	1,672,391	201,966
Total operating income	718,095,213	693,044,649	25,050,564
Non-operating income *b*	237,368,878	298,171,158	*d* 60,802,280
Gross income	955,464,091	991,215,807	*d* 35,751,716
Deductions from gross income:			
Interest on funded debt	386,483,143	376,241,333	10,241,810
Interest on unfunded debt	28,401,357	31,602,481	*d* 3,201,124
All other deductions *b*	227,589,566	235,677,286	*d* 8,087,720
Total deductions *b*	642,474,066	643,521,100	*d* 1,047,034
Net income	312,990,025	347,694,707	*d* 34,704,682
Disposition of net income:			
Dividend appropriations	169,563,440	205,914,908	*d* 36,351,468
Income appropriated for investment in physical property	20,807,042	27,371,949	*d* 6,564,907
Other income appropriations	12,890,736	12,681,240	209,496
Total appropriations of income	203,261,218	245,968,097	*d* 42,706,879
Balance to credit of profit and loss	109,728,807	101,726,610	8,002,197
EASTERN DISTRICT.			
Railway operating revenues	$1,272,113,670	$1,336,658,077	*d* $64,544,407
Railway operating expenses	921,518,313	1,022,689,475	*d* 101,171,162
Net operating revenue	350,595,357	313,968,602	36,626,755
Railway tax accruals	54,431,738	55,931,848	*d* 1,500,110
Uncollectible railway revenues	192,632	250	192,382
Railway operating income	295,970,987	258,036,504	37,934,483
Miscellaneous operating income	1,847,415	1,691,000	156,415
Total operating income	297,818,402	259,727,504	38,090,898
Non-operating income *b*	94,525,695	122,608,584	*d* 28,082,889
Gross income	392,344,097	382,336,088	10,008,009
Deductions from gross income:			
Interest on funded debt	133,525,888	128,452,321	5,073,567
Interest on unfunded debt	19,170,584	17,282,233	1,888,351
All other deductions *b*	127,616,309	134,084,837	*d* 6,468,528
Total deductions *b*	280,312,781	279,819,391	493,390
Net income	112,031,316	102,516,697	9,514,619
Disposition of net income:			
Dividend appropriations	66,013,580	82,760,690	*d* 16,747,110
Income appropriated for investment in physical property	7,498,781	16,058,152	*d* 8,559,371
Other income appropriations	6,835,719	6,634,278	201,441
Total appropriations of income.	80,348,080	105,453,120	*d* 25,105,040
Balance to credit of profit and loss	31,683,236	*def.* 2,936,423	34,619,659

a Duplications resulting from intercorporate relations not excluded. *b* Because of accounting

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INCOME ACCOUNT *a*.

(Railways having annual operating revenues above $1,000,000.)

Item.	Amount 1915.	Amount 1914.	Increase 1915 over 1914.
SOUTHERN DISTRICT.			
Railway operating revenues	$423,193,070	$469,299,525	*d* $46,106,455
Railway operating expenses	309,248,143	341,713,759	*d* 32,465,616
Net operating revenue	113,944,927	127,585,766	*d* 13,640,839
Railway tax accruals	18,586,600	18,989,330	*d* 402,730
Uncollectible railway revenues	125,220	6,116	119,104
Railway operating income	95,233,107	108,590,320	*d* 13,357,213
Miscellaneous operating income	.....	*def.* 3,697	3,697
Total operating income	95,233,107	108,586,623	*d* 13,353,516
Non-operating income *b*	28,533,742	29,203,135	*d* 669,393
Gross income	123,766,849	137,789,758	*d* 14,022,909
Deductions from gross income:			
Interest on funded debt	64,652,944	63,614,632	1,038,312
Interest on unfunded debt	986,266	870,067	116,199
All other deductions *b*	21,476,754	20,559,197	917,557
Total deductions *b*	87,115,964	85,043,896	2,072,068
Net income	36,650,885	52,745,862	*d* 16,094,977
Disposition of net income:			
Dividend appropriations	3,698,493	6,288,236	*d* 2,589,743
Income appropriated for investment in physical property	403,552	689,607	*d* 286,055
Other income appropriations	1,613,486	2,532,920	*d* 919,434
Total appropriations of income	5,715,531	9,510,763	*d* 3,795,232
Balance to credit of profit and loss	30,935,354	43,235,099	*d* 12,299,745
WESTERN DISTRICT.			
Railway operating revenues	$1,175,607,075	$1,223,956,683	*d* $48,349,608
Railway operating expenses	790,057,497	838,379,648	*d* 48,322,151
Net operating revenue	385,549,578	385,577,035	*d* 27,457
Railway tax accruals	60,200,747	60,809,586	*d* 608,839
Uncollectible railway revenues	332,069	22,015	310,054
Railway operating income	325,016,762	324,745,434	271,328
Miscellaneous operating income	26,942	*def.* 14,912	41,854
Total operating income	325,043,704	324,730,522	313,182
Non-operating income *b*	114,309,441	146,359,439	*d* 32,049,998
Gross income	439,353,145	471,089,961	*d* 31,736,816
Deductions from gross income:			
Interest on funded debt	188,304,311	184,174,380	4,129,931
Interest on unfunded debt	8,244,507	13,450,181	*d* 5,205,674
All other deductions *b*	78,496,503	81,033,252	*d* 2,536,749
Total deductions *b*	275,045,321	278,657,813	*d* 3,612,492
Net income	164,307,824	192,432,148	*d* 28,124,324
Disposition of net income:			
Dividend appropriations	99,851,367	116,865,982	*d* 17,014,615
Income appropriated for investment in physical property	12,904,709	10,624,190	2,280,519
Other income appropriations	4,441,531	3,514,042	927,489
Total appropriations of income.	117,197,607	131,004,214	*d* 13,806,607
Balance to credit of profit and loss	47,110,217	61,427,934	*d* 14,317,717

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PROFIT AND LOSS ACCOUNT, GENERAL BALANCE SHEET, INVESTMENT IN ROAD AND EQUIPMENT.

(Railways having annual operating revenues above $1,000,000.)

Item.	United States.	Eastern District.
PROFIT AND LOSS ACCOUNT—Fiscal year 1915: *a*		
Credit balance on June 30, 1914	$970,458,109	$246,586,773
Credit balance for current year from income account	109,728,807	31,683,236
Total surplus	1,080,186,916	278,270,009
Dividend appropriation of surplus	91,361,177	28,530,375
Surplus appropriated for investment in physical property	8,093,719	5,852,643
Other profit and loss items debit balance	78,562,085	43,532,882
Credit balance carried to balance sheet	$902,169,935	$200,354,109
GENERAL BALANCE SHEET—June 30, 1915: *a*		
Assets;		
Road and equipment	$13,530,304,444	$4,570,086,665
Sinking fund and other deposits	20,359,289	7,024,585
Miscellaneous physical property	160,018,212	99,564,332
Investments in affiliated companies	3,780,836,728	1,670,015,148
Other investments	775,587,578	274,776,933
Cash	304,630,172	140,455,856
Materials and supplies	238,040,662	96,850,617
Other current assets	488,835,557	266,117,558
Deferred assets	90,572,266	53,310,385
Unadjusted debits	187,111,446	65,577,132
Total	$19,576,296,354	$7,243,779,211
Liabilities;		
Capital stock	$6,814,711,248	$2,480,968,818
Other stock liabilities	64,169,108	33,650,581
Government grants	36,998	.....
Long term debt *b*	9,541,088,885	3,446,674,937
Current liabilities	921,879,988	501,690,726
Deferred liabilities	20,539,781	13,424,875
Unadjusted credits	671,533,421	215,395,361
Additions to property through income and surplus	411,911,535	256,998,737
Other appropriated surplus	228,255,455	94,621,067
Profit and loss credit balance	902,169,935	200,354,109
Total	$19,576,296,354	$7,243,779,211
INVESTMENT IN ROAD AND EQUIPMENT: *a*		
Investment to June 30, 1914	$13,207,814,619	$4,461,085,515
Investment from July 1, 1914 to June 30, 1915.	322,489,825	109,001,150
Investment in new lines and extensions	79,075,969	Cr. 6,863,653
Additions and betterments on owned lines	233,369,725	109,144,045
Additions and betterments on leased lines	10,044,131	6,720,758
Total investment in road and equipment to June 30, 1915	$13,530,304,444	$4,570,086,665

a Duplications resulting from intercorporate relations not excluded. *b* Includes

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PROFIT AND LOSS ACCOUNT, GENERAL BALANCE SHEET, INVESTMENT IN ROAD AND EQUIPMENT.

(Railways having annual operating revenues above $1,000,000.)

Southern District.	Western District.	Item.
		PROFIT AND LOSS ACCOUNT—Fiscal year 1915: *a*
$153,726,471	$570,144,865	Credit balance on June 30, 1914.
30,935,354	47,110,217	Credit balance for current year from income account.
184,661,825	617,255,082	Total surplus.
21,837,234	40,993,568	Dividend appropriation of surplus.
1,620,396	620,680	Surplus appropriated for investment in physical property.
1,996,407	33,032,796	Other profit and loss items debit balance.
$159,207,788	$542,608,038	Credit balance carried to balance sheet.
		GENERAL BALANCE SHEET—June 30, 1915: *a*
		Assets;
$2,304,527,850	$6,655,689,929	Road and equipment.
2,864,773	10,469,931	Sinking fund and other deposits.
11,047,862	49,406,018	Miscellaneous physical property.
309,634,467	1,801,187,113	Investments in affiliated companies.
71,522,893	429,287,752	Other investments.
47,564,229	116,610,087	Cash.
34,877,855	106,312,190	Materials and supplies.
70,285,503	152,432,496	Other current assets.
12,609,921	24,651,960	Deferred assets.
27,721,886	93,812,428	Unadjusted debits.
$2,892,657,239	$9,439,859,904	Total.
		Liabilities;
$983,391,461	$3,350,350,969	Capital stock.
4,894,527	25,624,000	Other stock liabilities.
13,378	23,620	Government grants.
1,459,711,136	4,634,702,812	Long term debt. *b*
112,097,861	308,091,401	Current liabilities.
1,728,087	5,386,819	Deferred liabilities.
134,037,609	322,100,451	Unadjusted credits.
31,790,622	123,122,176	Additions to property through income and surplus.
5,784,770	127,849,618	Other appropriated surplus.
159,207,788	542,608,038	Profit and loss credit balance.
$2,892,657,239	$9,439,859,904	Total.
		INVESTMENT IN ROAD AND EQUIPMENT: *a*
$2,257,639,115	$6,489,089,989	Investment to June 30, 1914.
46,888,735	166,599,940	Investment from July 1, 1914 to June 30, 1915.
5,650,382	80,289,240	Investment in new lines and extensions.
39,742,674	84,483,006	Additions and betterments on owned lines.
1,495,679	1,827,694	Additions and betterments on leased lines.
$2,304,527,850	$6,655,689,929	Total investment in road and equipment to June 30, 1915.

funded debt, receivers' certificates, and non-negotiable debt to affiliated companies.

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RAILWAY OPERATING REVENUES AND EXPENSES, EMPLOYEES AND THEIR COMPENSATION, FREIGHT TRAFFIC MOVEMENT.

(Railways having annual operating revenues above $1,000,000.)

Item.	United States.	Eastern District.
RAILWAY OPERATING REVENUES — Fiscal year 1915:		
Freight	$1,977,402,839	$874,141,715
Passenger service train revenue	783,401,352	343,790,678
Passenger	629,155,489	276,197,516
Mail	56,949,414	20,735,548
Express	68,942,809	30,911,853
All other rail-line transportation	36,718,310	19,242,228
Total rail-line transportation	2,797,522,501	1,237,174,621
Water-line transportation	13,034,648	3,988,576
Incidental operating revenue	58,089,968	30,134,475
Joint facility credit balance	2,266,698	815,998
Total operating revenues	$2,870,913,815	$1,272,113,670
RAILWAY OPERATING EXPENSES — Fiscal year 1915:		
Maintenance of way and structures	$363,902,819	$153,017,164
Maintenance of equipment	496,666,194	234,282,256
Traffic	59,394,183	22,537,205
Transportation—rail-line	1,002,619,070	467,556,128
Transportation—water-line	8,173,995	2,630,046
Miscellaneous operations	22,869,188	10,582,518
General expenses	74,143,669	31,653,636
Transportation for investment—Cr.	6,945,165	740,640
Total operating expenses	$2,020,823,953	$921,518,313
EMPLOYEES AND THEIR COMPENSATION:		
Average number of employees, fiscal year 1915:		
General and division officers	a 13,380	b 5,578
All employees, excluding general and division officers	a 1,260,601	b 585,239
Total compensation, fiscal year 1915:		
General and division officers	c $44,219,510	d $19,103,975
All employees, excluding general and division officers	c $1,110,084,052	d $541,023,291
Average annual compensation per employee, excluding general and division officers	c $813.17	b $843.73
FREIGHT TRAFFIC MOVEMENT—Fiscal year 1915:		
Revenue freight originated—tons:		
All commodities	f 917,146,411	g 450,766,111
Products of agriculture	107,929,623	26,198,600
Products of animals	25,787,238	9,541,798
Products of mines	503,794,894	271,704,692
Products of forests	76,489,546	16,712,375
Manufactures	129,704,491	84,357,224
Miscellaneous	28,493,490	20,783,732
L. C. L. goods not distributed above	44,947,129	21,467,690

a 197,959.20 miles represented.
b 53,359.76 " "
c 213,543.09 " "
d 57,506.03 miles represented.
e 196,906.71 " "
f 224,490.95 " "

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RAILWAY OPERATING REVENUES AND EXPENSES, EMPLOYEES AND THEIR COMPENSATION, FREIGHT TRAFFIC MOVEMENT.

(Railways having annual operating revenues above $1,000,000.)

Southern District.	Western District.	Item.
		RAILWAY OPERATING REVENUES — Fiscal year 1915:
$305,028,634	$798,232,490	Freight.
105,702,630	333,908,044	Passenger service train revenue.
85,761,417	267,196,556	Passenger.
7,523,648	28,690,218	Mail.
10,326,554	27,704,402	Express.
4,484,587	12,991,495	All other rail-line transportation.
415,215,851	1,145,132,029	Total rail-line transportation.
120,695	8,925,377	Water-line transportation.
7,319,691	20,635,802	Incidental operating revenue.
536,833	913,867	Joint facility credit balance.
$423,193,070	$1,175,607,075	Total operating revenues.
		RAILWAY OPERATING EXPENSES — Fiscal year 1915:
$58,607,483	$152,278,172	Maintenance of way and structures.
80,644,628	181,739,310	Maintenance of equipment.
10,959,320	25,897,658	Traffic.
146,227,128	388,835,814	Transportation—rail-line.
80,694	5,463,255	Transportation—water-line.
2,190,847	10,095,823	Miscellaneous operations.
11,905,914	30,584,119	General expenses.
1,367,871	4,836,654	Transportation for investment—Cr.
$309,248,143	$790,057,497	Total operating expenses.
		EMPLOYEES AND THEIR COMPENSATION:
		Average number of employees, fiscal year 1915:
h 2,834	*i* 4,968	General and division officers.
h 224,138	*i* 451,224	All employees, excluding general and division officers.
		Total compensation, fiscal year 1915:
h $7,199,056	*j* $17,916,479	General and division officers.
h $160,719,280	*j* $408,341,481	All employees, excluding general and division officers.
h $717.05	*k* $821.40	Average annual compensation per employee, excluding general and division officers.
		FREIGHT TRAFFIC MOVEMENT—Fiscal year 1915:
		Revenue freight originated—tons:
l 157,572,373	*m* 308,807,927	All commodities.
13,594,674	68,136,349	Products of agriculture.
2,160,529	14,084,911	Products of animals.
95,533,635	136,556,567	Products of mines.
21,069,015	38,708,156	Products of forests.
15,763,128	29,584,139	Manufactures.
2,525,037	5,184,721	Miscellaneous.
6,926,355	16,553,084	L. C. L. goods not distributed above.

g 58,479.54 miles represented.
h 39,343.36 " "
i 105,256.08 " "
j 116,693.70 miles represented.
k 104,203.59 " "
l 42,361.73 " "
m 123,649.68 " "

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TRAFFIC AND MILEAGE STATISTICS.

(Railways having annual operating revenues above $1,000,000.)

Item.	United States.	Eastern District.
TRAFFIC AND MILEAGE STATISTICS — Fiscal year 1915:		
Train-miles;		
Freight	537,776,012	229,130,132
Passenger	558,046,198	234,977,302
Mixed	28,826,255	4,887,504
Special	917,378	380,585
Total transportation service	1,125,565,843	469,375,523
Work service	34,590,701	14,504,082
Locomotive-miles;		
Freight (excluding helper and light)	535,473,405	226,695,438
Total freight	613,971,205	274,338,226
Passenger (excluding helper and light)	541,405,928	226,530,746
Total passenger	567,274,444	241,234,540
Mixed	29,856,643	5,028,524
Special	987,932	415,861
Switching (train and yard)	310,779,688	167,718,769
Total transportation service	1,522,869,912	688,735,920
Work service	43,478,778	19,544,499
Car-miles;		
Freight—loaded	12,763,243,826	5,709,578,676
Freight—empty	6,486,867,698	3,137,837,155
Total freight (including caboose)	19,787,012,943	9,073,273,629
Passenger	1,315,824,081	585,612,249
Sleeping, parlor, and observation	752,741,587	274,837,947
Other passenger	1,091,496,106	456,955,415
Total passenger	3,160,061,774	1,317,405,611
Total mixed freight (including caboose)	205,580,677	34,808,116
Total mixed passenger	55,803,478	9,097,019
Special—freight and passenger	9,898,960	3,296,525
Total transportation service	23,218,357,832	10,437,880,900
Work service	227,883,524	57,128,662
Freight service;		
Tons of revenue freight carried	1,683,337,377	998,255,807
Tons of non-revenue freight carried	219,929,292	93,496,269
Total tons carried	1,903,266,669	1,091,752,076
Ton-miles of revenue freight	273,758,173,613	134,994,558,402
Ton-miles of non-revenue freight	28,861,094,672	8,403,529,900
Total ton-miles	302,619,268,285	143,398,088,302
Passenger service;		
Revenue passengers carried	935,686,180	570,939,741
Revenue passenger-miles	31,859,712,578	14,944,408,825

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TRAFFIC AND MILEAGE STATISTICS.

(Railways having annual operating revenues above $1,000,000.)

Southern District.	Western District.	Item.
		TRAFFIC AND MILEAGE STATISTICS — Fiscal year 1915:
		Train-miles;
101,260,608	207,385,277	Freight.
88,759,005	234,309,891	Passenger.
4,893,000	19,045,751	Mixed.
181,323	405,470	Special.
195,043,931	461,146,389	Total transportation service.
5,665,732	14,420,887	Work service.
		Locomotive-miles;
100,515,742	208,262,225	Freight (excluding helper and light).
112,199,954	227,433,025	Total freight.
87,116,346	227,758,836	Passenger (excluding helper and light).
90,268,529	235,771,375	Total passenger.
4,975,400	19,852,719	Mixed.
135,256	436,815	Special.
43,407,855	99,653,064	Switching (train and yard).
250,986,994	583,146,998	Total transportation service.
6,696,082	17,238,197	Work service.
		Car-miles;
2,172,456,505	4,881,208,645	Freight—loaded.
1,162,682,489	2,186,348,054	Freight—empty.
3,436,145,504	7,277,593,810	Total freight (including caboose).
208,465,218	521,746,614	Passenger.
103,679,228	374,224,412	Sleeping, parlor, and observation.
154,404,083	480,136,608	Other passenger.
466,548,529	1,376,107,634	Total passenger.
25,601,244	145,171,317	Total mixed freight (including caboose).
10,779,547	35,926,912	Total mixed passenger.
1,206,765	5,395,670	Special—freight and passenger.
3,940,281,589	8,840,195,343	Total transportation service.
38,654,559	132,100,303	Work service.
		Freight service;
236,021,082	449,060,538	Tons of revenue freight carried.
39,429,010	87,004,013	Tons of non-revenue freight carried.
275,450,042	536,064,551	Total tons carried.
47,838,244,220	90,925,370,991	Ton-miles of revenue freight.
5,594,939,046	14,862,625,726	Ton-miles of non-revenue freight.
53,433,183,266	105,787,996,717	Total ton-miles.
		Passenger service;
108,271,495	256,474,944	Revenue passengers carried.
3,976,244,830	12,989,058,923	Revenue passenger-miles.

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AVERAGES AND RATIOS—FISCAL YEAR 1915.

(Railways having annual operating revenues above $1,000,000.)

Item.	United States.	Eastern District.
AVERAGE PER MILE OF LINE:		
Operating revenues	$12,573.49	$21,669.59
Operating expenses	$8,850.43	$15,697.44
Net operating revenue	$3,723.06	$5,972.15
Taxes	$583.45	$927.21
Operating income	$3,136.77	$5,041.66
Freight revenue	$8,660.26	$14,890.41
Passenger revenue	$2,755.46	$4,704.84
Passenger service train revenue	$3,431.00	$5,856.24
Freight train-miles (freight train density)	2,355	3,903
Passenger train-miles (pass. train density)	2,444	4,003
Total revenue train-miles (train density)	4,930	7,995
Total revenue locomotive-miles	6,670	11,732
Total freight car-miles	87,590	155,193
Total passenger car-miles	14,097	22,609
Revenue ton-miles (freight density)	1,198,955	2,299,540
Revenue passenger-miles (pass. density)	139,533	254,568
AVERAGE PER MILE OF MAIN TRACK:		
Freight revenue	$7,536.95	$11,009.61
Passenger revenue	$2,398.05	$3,478.64
Passenger service train revenue	$2,985.97	$4,329.96
AVERAGE PER TRAIN-MILE:		
Operating revenues	$2.55	$2.71
Operating expenses	$1.80	$1.96
Net operating revenue	$0.75	$0.75
AVERAGE PER FREIGHT TRAIN-MILE:		
Freight revenue	$3.49	$3.74
Loaded freight car-miles (loaded cars per train)	24	25
Empty freight car-miles (empty cars per train)	12	14
Total freight car-miles (cars per train)	36	39
Revenue ton-miles (tons per train)	483	577
AVERAGE PER PASSENGER TRAIN-MILE:		
Passenger revenue	$1.07	$1.15
Passenger service train revenue	$1.33	$1.43
Passenger car-miles (cars per train)	5.7	5.6
Revenue passenger-miles (passengers per train)	54	62
AVERAGE PER FREIGHT CAR-MILE:		
Revenue ton-miles (tons per loaded car)	21	24
Revenue ton-miles (tons per car)	14	15
Freight revenue—cents	15.32	15.24
AVERAGE PER PASSENGER CAR-MILE:		
Revenue passenger-miles (passengers per car)	15	17
Passenger revenue—cents	29.77	31.83
MISCELLANEOUS AVERAGES AND RATIOS:		
Operating ratio (per cent)	70.39	72.44
Average haul per ton—revenue freight—miles *a*	162.63	135.23
Average journey per passenger—miles *a*	34.05	26.18
Average receipts per ton-mile—cents	.722	.648
Average receipts per passenger-mile—cents	1.975	1.848
Average tractive power per locomotive—pounds	31,883	32,635
Average capacity per freight car—tons	40	41
Average seating capacity per passenger car—coaches only	66	69

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AVERAGES AND RATIOS—FISCAL YEAR 1915.

(Railways having annual operating revenues above $1,000,000.)

Southern District.	Western District.	Item.
		AVERAGE PER MILE OF LINE:
$10,001.74	$9,233.94	Operating revenues.
$7,308.77	$6,205.60	Operating expenses.
$2,692.97	$3,028.34	Net operating revenue.
$439.28	$472.85	Taxes.
$2,250.74	$2,552.88	Operating income.
$7,209.04	$6,269.81	Freight revenue.
$2,026.88	$2,098.73	Passenger revenue.
$2,498.17	$2,622.72	Passenger service train revenue.
2,393	1,629	Freight train-miles (freight train density).
2,098	1,840	Passenger train-miles (pass. train density).
4,610	3,622	Total revenue train-miles (train density).
5,932	4,580	Total revenue locomotive-miles.
81,831	58,332	Total freight car-miles.
11,293	11,104	Total passenger car-miles.
1,130,608	714,184	Revenue ton-miles (freight density).
93,975	101,631	Revenue passenger-miles (pass. density).
		AVERAGE PER MILE OF MAIN TRACK:
$6,617.25	$5,832.17	Freight revenue.
$1,860.50	$1,952.23	Passenger revenue.
$2,293.10	$2,439.65	Passenger service train revenue.
		AVERAGE PER TRAIN-MILE:
$2.17	$2.55	Operating revenues.
$1.59	$1.71	Operating expenses.
$0.58	$0.84	Net operating revenue.
		AVERAGE PER FREIGHT TRAIN-MILE:
$2.87	$3.53	Freight revenue.
21	24	Loaded freight car-miles (loaded cars per train).
11	11	Empty freight car-miles (empty cars per train).
32	35	Total freight car-miles (cars per train).
451	402	Revenue ton-miles (tons per train).
		AVERAGE PER PASSENGER TRAIN-MILE:
$0.92	$1.05	Passenger revenue.
$1.13	$1.32	Passenger service train revenue.
5.3	5.9	Passenger car-miles (cars per train).
42	51	Revenue passenger-miles (passengers per train).
		AVERAGE PER FREIGHT CAR-MILE:
22	18	Revenue ton-miles (tons per loaded car).
14	13	Revenue ton-miles (tons per car).
13.93	16.03	Freight revenue—cents.
		AVERAGE PER PASSENGER CAR-MILE:
12	14	Revenue passenger-miles (passengers per car).
26.72	28.89	Passenger revenue—cents.
		MISCELLANEOUS AVERAGES AND RATIOS:
73.07	67.20	Operating ratio (per cent).
202.69	202.48	Average haul per ton—revenue freight—miles.*a*
36.72	50.45	Average journey per passenger—miles.*a*
.638	.878	Average receipts per ton-mile—cents.
2.157	2.065	Average receipts per passenger-mile—cents.
31,918	31,004	Average tractive power per locomotive—pounds.
40	37	Average capacity per freight car—tons.
65	68	Average seating capacity per passenger car—coaches only.

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BUREAU OF RAILWAY ECONOMICS

Established by Railways of the United States
for the Scientific Study of Transportation Problems

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Arguments For and Against Limitation of Length of Freight Trains

Consecutive No. 92
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WASHINGTON, D. C.
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BULLETINS OF THE
BUREAU OF RAILWAY ECONOMICS

MONTHLY BULLETINS

The monthly summary of Revenues and Expenses of Steam Roads in the United States has been issued regularly since July, 1910.

Following is the list of bulletins for the last twelve months:

Consecutive Number.	Monthly Report Series.	Month of—
77.	58.	March, 1915.
78.	59.	April, 1915.
79.	60.	May, 1915.
80.	61.	June, 1915.—Insert with Bulletin—Operating Returns: Fiscal Years Ending June 30, 1914 and 1915.
82.	62.	July, 1915.
84.	63.	August, 1915.
85.	64.	September, 1915.
86.	65.	October, 1915.
87.	66.	November, 1915.
89.	67.	December, 1915.
90.	68.	January, 1915.
91.	69.	February, 1915.

The following issues are Out of Print:

Consecutive Number.	Monthly Report Series.	Month of—
7.	5.	October, 1910.
9.	7.	December, 1910.
13.	10.	March, 1911.
19.	13.	June, 1911.
22.	15.	August, 1911.
51.	37.	June, 1913.

(Continued to page 3 of cover.)

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Arguments For and Against Limitation of Length of Freight Trains

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Bureau of Railway Economics
Washington, D. C.
May, 1916

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INTRODUCTION.

Origin and Extent of Movement to Secure Train-Limit Legislation.

Following in some states the defeat, and in others the repeal, of so-called "full-crew" laws, there has been a widespread effort on the part of the legislative representatives of the railway labor brotherhoods to secure substitute legislation. This has taken the form of bills, introduced in numerous states, to limit the length of freight trains. The grounds on which they urge these proposals are almost solely considerations of safety. They claim that the number of casualties on railways to all classes of persons, but especially to trainmen and passengers, is increasing and that this is due in substantial measure to the increasing number of cars handled in a single train.

In the attempts to secure so-called "full-crew" legislation, efforts were directed toward having the law prescribe the minimum number of men it should be lawful to employ on trains containing specified numbers of cars. The bills that have been advocated more recently have sought to fix either the maximum length of a train or the maximum number of cars in a train. In some cases the limit has been set at trains a half mile long; in some at 50 cars. In Illinois in 1915 the successful opposition of the railways to the passage of a bill limiting trains to 50 cars was met by an amendment placing the maximum at 75 cars. The bill as thus amended also failed.

During the winter and spring of 1914-1915 bills to limit the length of trains were introduced in the legislatures of 20 states. All of them failed to pass. These states were:

California,
Colorado,
Georgia,
Illinois,
Indiana,
Iowa,
Kansas,
Michigan,
Minnesota,
Nevada,
New Jersey,
New York,
North Carolina,
North Dakota,
Ohio,
Pennsylvania,
South Carolina,
South Dakota,
Utah,
Wisconsin.

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In Arizona legislation limiting freight trains to 70 cars is in force. This is the only state in which such legislation has been passed.

Long Trains One Feature of Progress in Railway Transportation.

The proposal to limit the length of freight trains, whether for reasons of safety, as claimed, or otherwise, fundamentally concerns the whole scheme of railway operating methods. An intelligent consideration of the merits of the proposal must, therefore, take account of the important rôle that long freight trains have come to play in railway progress.

The increase in the length of freight trains has been an important factor in the steadily growing use of large train units; and large train units have constituted the cardinal feature of the increased efficiency of railway transportation in the United States. Throughout every industry, efforts to reduce the cost of a unit of product have given wide extension to large scale methods of production. The application of these methods to transportation, as rapidly as volume of business permitted, has been made through larger and larger steamships and longer and longer trains.

This use of long freight trains not only has reduced the necessity of raising many freight rates to meet the marked increase in wages and prices generally, but has permitted some reductions in rates. This benefit from large train units has inured to practically the entire population, for substantially all people are today dependent, directly or indirectly, on railway transportation for a great part, if not all, of their supply of commodities. Railway employees, considered separately as one group, have been benefited to the extent that the economies from large trains have enabled the carriers to meet successive advances in wages, notwithstanding the public's restraint upon increases in rates. Such a two-fold pressure upon the railways, namely, public demand for a lowering of rates and employees' demand for increases in wages, could not have been met without progressive economies in operation resulting mainly from the handling of freight in larger units.

Further, the increase in train load, caused in large part by the use of longer trains, has resulted in savings that have added to the fund from which permanent betterments and improvements to the

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properties have been made, for the benefit not only of the public, but also of the employees working thereon.

The place of large train units, as the central factor in increased efficiency in railway operation, can best be understood by a brief review of those facts of railway development that are associated with the movement.

Number of Cars per Freight Train.

The average number of cars per freight train on all the railways of the United States increased from 26.8 cars in 1904 to 34.3 cars in 1914, an increase of 28 per cent. On the railways of the Eastern District the increase was from 28.6 to 36.4 cars; on the railways of the Southern District, from 23.8 to 30.7 cars; and on the railways of the Western District, from 26.1 to 33.8 cars. The facts are shown in Table I.

TABLE I.

FREIGHT CARS PER TRAIN.*

Year.	United States.	Eastern District.	Southern District.	Western District.
1904	26.8	28.6	23.8	26.1
1905	27.6	28.8	24.4	27.5
1906	27.9	29.3	24.4	27.8
1907	27.2	28.8	23.1	27.0
1908	28.7	30.9	24.3	28.1
1909	30.2	32.4	26.5	29.3
1910	29.9	32.0	26.8	28.9
1911	30.8	32.8	27.8	30.1
1912	31.8	33.9	28.3	31.1
1913	32.7	34.7	29.1	32.0
1914	34.3	36.4	30.7	33.8
Increase 1914 over 1904.	7.5	7.8	6.9	7.7

*Computed from Statistics of Railways in the United States, Interstate Commerce Commission, 1904 to 1914. Averages exclude mixed train mileage.

Of course, these averages include many roads with comparatively light traffic. The larger railways show averages much greater than these. And in those sections of the country where the traffic is heavy, especially where the volume of a single class of freight warrants the handling of solid trains of minerals like coal, and of agricultural products, freight trains not infrequently include from 50 to 75 cars, and even more.

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On branch lines the service requires that trains be run frequently regardless of the smallness of the number of cars which it is necessary to handle. The average number of cars operated as a train is affected by the fact that such an average covers trains run in both directions and the number of cars run in one direction one day may be much greater than the number to be moved in the opposite direction. Livestock trains and those carrying perishable freight frequently are and must be moved in small units. It is only on main arteries where the great volume of business moves that long trains are common.

Capacity of Freight Cars.

The average capacity of freight cars on the railways of the United States increased from 30 tons in 1904 to 39 tons in 1914. The average load carried by freight cars increased from 17.7 tons in 1904 to 21.1 tons in 1914. Here again this average falls far short of indicating the capacity and loading attained in the sections of greatest density of freight business, and especially in the transportation of minerals. In 1914, 30 per cent of all freight cars had a capacity of 50 tons or over. Table II shows the increase in average capacity and loading from year to year.

TABLE II.

AVERAGE CAPACITY OF FREIGHT CARS AND TONS CARRIED PER LOADED CAR.*

Year.	Average capacity (tons).	Average load per car (tons).	Year.	Average capacity (tons).	Average load per car (tons).
1904....	30	17.7	1910....	36	19.8
1905....	31	18.1	1911....	37	19.7
1906....	32	18.9	1912....	37	20.2
1907....	34	19.7	1913....	38	21.1
1908....	35	19.6	1914....	39	21.1
1909....	35	19.3			

*Statistics of Railways in the United States, Interstate Commerce Commission, 1904-1914; Bulletin 81, Bureau of Railway Economics.

Train Loads.

The effect of heavier car loading and increased number of cars per train is shown in the train load. This has been increased at an even greater rate than either of the component factors. In 1904 the average load carried per freight train on the railways of the

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United States was 307.8 tons. By 1914 this increased to 451.8 tons, or nearly 50 per cent. In the Eastern District, including the region of heaviest traffic, the average train load in 1914 was 537.3 tons. The progress of this growth is shown in Table III.

TABLE III.

AVERAGE TONS PER TRAIN.*

Year.	Tons per train.	Year.	Tons per train.
1894	179.8	1905	322.3
1895	189.7	1906	344.4
1896	198.8	1907	357.4
1897	204.6	1908	351.8
1898	226.5	1909	362.6
1899	243.5	1910	380.4
1900	270.9	1911	383.1
1901	281.3	1912	406.8
1902	296.5	1913	445.4
1903	310.5	1914	451.8
1904	307.8		

Increase 1894 to 1914, 151.3%. Increase 1904 to 1914, 46.8%.

On some lines the average train load is over 1,000 tons, and train loads of minerals from 3,500 tons to 5,000 tons are not uncommon.

Size and Power of Locomotives.

To haul such heavy trains the size and power of locomotives have necessarily been increased. The average weight, exclusive of tender, increased from 62 tons in 1904 to 83 tons in 1914, and the average tractive power increased from 22,804 pounds in 1904 to 30,420 pounds in 1914. The steady increase in tractive power is shown in Table IV.

TABLE IV.

AVERAGE TRACTIVE POWER OF LOCOMOTIVES, 1904-1914.*

Year.	Pounds.	Year.	Pounds.
1904	22,804	1910	27,282
1905	23,666	1911	27,949
1906	24,741	1912	28,634
1907	25,823	1913	29,702
1908	26,384	1914	30,420
1909	26,634		

*Statistics of Railways in the United States, Interstate Commerce Commission, 1904-1914.

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In 1914 there were in operation on the railways of the United States 775 locomotives of the Mallet type with an average weight, exclusive of tender, of 197 tons and average tractive power of 79,021 pounds. A number of these exceeded 100,000 pounds in their tractive power.

Track, Bridges and Other Structures.

The steady introduction of larger, heavier and stronger equipment and the constant increase in weight of freight trains have required corresponding changes of every other part of the railway plant. Tracks have been relaid with heavier rails. Bridges have been replaced by stronger ones capable of bearing the heavier trains. Curves have been reduced or eliminated. Grades have been cut down. Passing tracks have been rebuilt to accommodate the longer trains. Water supply and coaling stations have been enlarged to adapt their capacity to the greater water and coal consumption of locomotives, and have been relocated to suit the greater distances fixed between stops in the interest of more efficient operation. Finally, terminal facilities, round-houses and shops have been improved and enlarged to accommodate the heavier equipment, or in some instances have been relocated to reduce the length of run.

In order that at the outset a comprehensive view of the problem of limiting train length may be had, the arguments for and against the proposal will be stated in order and without discussion.

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SUMMARY OF ARGUMENTS FOR AND AGAINST LIMITING THE LENGTH OF TRAINS.

Arguments for Limiting Train Length.

The principal arguments presented for train-limit legislation may be summarized as follows:

1. It is difficult to transmit signals by hand or lantern from the rear of a long train to the engine. Hence, there is frequent failure of enginemen to receive or to understand such signals, and an increase of accidents by reason of such failure.

2. Because of the greater aggregate weight of the cars in a long train, there is more strain on the draft gear of the cars near the locomotive. Therefore, there is more risk of accident from the pulling out of drawbars or the breaking of knuckles or knuckle-pins. Also, the greater momentum of a long train puts a harder strain on the brakes of the forward cars when the train is stopped and hence entails greater possibility of failure of brake gear.

3. In coming to a stop, especially when stopping suddenly as in an emergency, or when, by the bursting of an air hose or otherwise, brakes are automatically set, the liability of the train "buckling" is greater in a long train than in a short one, and the risk of collision from passing trains is increased. The reason assigned for this claim is the fact that in applying air brakes from the locomotive the brakes on the cars nearest the engine set first and then, in turn, those next behind, and so on until the rear cars are reached. Now, the interval of time between the first check upon the speed of the forward cars and the final slackening of the rear cars is greater on long than on short trains. Hence it is urged that there is greater opportunity and risk of a "bunching of slack," in the course of which the unchecked momentum of the rearward part of the train can exert a pressure upon the already retarded forward cars sufficiently powerful to force the intervening cars to one side.

Because of the greater amount of "slack" in the draft gear of long trains, more severe shocks result from the sudden stopping of the train. This is claimed to be particularly the case when the brake action on the forward cars is more effective than on the cars in the rear part of the train. In addition to the risk of buckling.

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it is claimed that such severe shocks are liable to cause injury to men upon the rear of the train, throwing them from the cars or knocking them down in the caboose. In short trains there is less slack and therefore, it is maintained, less liability of injury resulting from emergency stops.

4. Liability to accident from defective equipment is greater in long than in short trains, it is contended, because:

(*a*) The strain upon draft gear, brake rigging and the body of the car is greater in long than in short trains. Hence, the liability of parts of cars becoming defective is intensified by the use of long trains. Not only is the number of such defective parts in a train likely to bear a certain relation to the number of cars in the train, but

(*b*) There is greater likelihood that such defects will escape detection in the inspection by trainmen during stops on the road, since the cars in a long train are likely to be inspected more hurriedly than in a short train.

5. More time is required for stopping and starting long, heavy trains, when it is necessary to do so to avoid accident; hence, there is greater risk of accident from situations that might be harmless in the case of short trains.

Arguments Against Limiting Train Length.

All of the arguments advanced for train-limit legislation are directed against the alleged danger of the long train as a *unit* of operation. They take no account of other factors affecting safety of operation as a whole that would be influenced by restrictions on train length. For this reason the case against train-limit legislation distinguishes two groups of arguments on the question of safety:

1. The claim that, whether for any or all of the five reasons given, the operation of a long train necessarily or ordinarily involves more risk than that of a short train is not, it is contended, sustained either by an analysis of the various elements affecting safety, or by the available statistical evidence.

2. Reducing and limiting the length of trains necessarily means that more trains must be operated to handle existing business, and that there must be even more than a proportionate increase in their

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present number in order to care for additional business in the future. Crowding the railway lines with more trains, a necessary consequence of restrictions in the number of cars operated as a single train, will give more chances for collisions, derailments, for misunderstanding of orders because of the greater number of orders, and for any and all such causes of accidents as are likely to arise in connection with the more frequent stopping, starting, and passing of trains.

In the following pages the points thus briefly stated will be considered more at length.

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RELATIVE SAFETY OF LONG AND SHORT TRAINS AS OPERATING UNITS.

The claim that long trains are less safe to operate than short trains is based on five arguments, which will now be discussed in order.

Transmission of Hand Signals.

It is claimed that it is difficult to transmit intelligible signals from the rear of a long train to the engineman on the locomotive. This claim would seem, at first thought, to have much force, but its force is greatly impaired, if not destroyed, by the changes in methods of operation and train control which have accompanied increases in the length of trains. Even if the claim is true, it has little bearing, it is insisted, on the question of limiting train length.

In the class of service usually performed by long trains, the necessity of exchanging signals between the rear and the engine is much less frequent than on the shorter trains that do junction or local work. Long trains are ordinarily operated in through service. They move as a unit between division points with few or no stops for local service at stations. To avoid interruptions in their movement, they ordinarily have the right of way over shorter trains performing station service. In certain instances they have the right of way over the less important passenger trains. Except to take on supplies of coal or water, or for unforeseen contingencies, they usually make no stops between division points. And these few occasions for stopping are previously known by the engineman without need of communication from other trainmen at the rear. Ordinarily, therefore, there is little occasion for the transmission of signals by hand or lantern from one end of the train to the other. It is the custom on most railroads to require an exchange of signals between the front and rear ends of trains when passing stations or through interlocking plants. Such rules are carried out successfully even where 100 cars are handled as a single train. Section foremen, track-walkers, agents, operators, towermen and other employees stationed at such points are in position to give warning to enginemen and trainmen of any unusual circumstances likely to cause accident to the train.

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Further, practically all cars of all trains are equipped with air-brake apparatus controlled from the engine. In case of an emergency stop, the engineman can call out the rear brakeman for flag duty by the locomotive whistle. He is recalled by the same means. In the case of need for the transmission of signals in the reverse direction, which on the road is relatively infrequent in this class of service, the engineman can be signaled, if need be, with the air signal from the caboose, or the train can be stopped by the application of the brakes from any car, though this is a somewhat hazardous operation. So, also, when a train is maneuvering, fully made up with air hose connected, there is always a chance to avoid the consequences of failure of a signal from the rear to the locomotive by air signal from the caboose. In terminal yards the length of the train, as finally made up, does not enter into consideration, for it then consists of several parts, each of which is ordinarily under the control of a member of the yard switching force who is relatively not far distant from the engine.

Finally, actual tests indicate that hand signals can be successfully transmitted from the rear of long trains to the locomotive, even under adverse weather conditions. In a hearing in February, 1915, before a committee of the Kansas legislature, C. W. Kouns, General Manager of the Eastern lines of the Atchison, Topeka & Santa Fe, described tests made with a train of 79 cars, as follows:

"We had a series of tests made on January 26, which was a foggy, damp, dark day. The train [crew] consisted of an engineer, fireman, two brakemen and a conductor. The first test was made with one brakeman on top of the car next to the engine and the other on the caboose, 3,137 feet apart. Every signal made was correctly answered and the engine was correctly moved on it on all of those tests at that distance. In the second test, we placed the men on the ground alongside the train because it would probably be more difficult to signal on the ground by hand than it would on top of the cars. These men were 3,188 feet apart; every signal was correctly transmitted to the engineer, who made his movements, without a flaw, upon each signal transmitted. Every man participating was more than forty years old."

It may be contended that such a test as this, planned beforehand and made with the employees in a specially attentive state of mind, is not entirely representative of all situations. But, as already ex-

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plained, the occasions for hand signaling usually arise, in the nature of things, in connection either with scheduled stops or special stops on some signal or situation ahead perceived by the engineer. In either case the train crew's attention is specifically drawn to the signaling to be done. The situation is practically identical with that in the special test. That test indicates that, whatever the difficulties presented by long trains, they can be overcome with due care and attention. Hence, the only additional risk from length of train in hand signaling is that springing from the decline in alertness that arises when operations become habitual. But the remedy for this would seem to be a recognition by the employees of their own claim that operations with long trains are somewhat different from ordinary operations and that they require therefore such a degree of care as would be taken in a special test.

Considering, then, the relative infrequency of occasions for hand signaling in the service in which long trains are used, and considering that on far the greater part of such occasions as do arise any special risk due to length of train can be met by recognizing that there is special risk and by giving the work special care and attention, railway managers insist that limiting the length of trains is hardly a rational solution for the difficulties of hand signaling.

Failures of Draft Rigging or Brake Gear, Parting of Trains, etc.

It is claimed that increasing the number of cars in a train increases the liability of accident to trainmen on account of the greater danger of failure of draft gear or brake rigging, or of parting of trains. This assumes that t[illegible]e in the strength of the cars themselves, as well as improvemen[illegible] draft gear and braking apparatus, have not kept pace with their increased number per train.

It can be answered that probably no features of the equipment of cars have been subjected in recent years to more careful study and improvement, to render them adequate to the augmented load, than draft gear and brake rigging. Both have received the benefit of the combined study of manufacturers and railway officers, expert engineers and employees. Both the construction of the freight car in detail and the sufficiency of its attachments are subjects of constant investigation by the Master Car Builders' Association. Changes in standards and recommended practice follow closely the appearance of a necessity for increased strength.

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If it were admitted that failures of draft gear or brake apparatus are more frequent than formerly, this, it is said, would indicate merely that the improvement in the design of cars for strength of construction and equipment has not yet fully met the demands of heavier trains. Obviously, the remedy for such a situation lies in bringing the strength of equipment, including that of attachments, up to the standards that progressive experience is showing to be necessary in the operation of long trains, rather than in drastic proposals that would result in throwing away all the economic advantages secured from long trains. This progress, as already said, the railways are rapidly making. Meanwhile it is common practice, so far as it is necessary to use them in long trains, to provide for the location of the weaker cars at points in the train where they will be subject to the least strain. But ordinarily they are employed in service in which shorter trains fulfill the requirements of traffic.

Buckling of Trains.

It would be correct to say that, as an abstract proposition, and other things being equal, long trains are subject to greater risk of buckling than short trains. For it is true, as a general statement, that the longer the train the longer will be the interval before the application of the brakes on the rear cars will cause a slackening of their speed uniform with that of the forward cars. It is also true that, if frequent stops were made by long trains under emergency conditions and if there were a considerable number of empty cars on the front end of the train, there might occur such a "bunching of slack" as would [illegible] severe shock from the impact of the cars in the rear. [illegible] is urged, speaking concretely and with regard to actual conditions, long trains are not made up and operated "other things equal" with short trains. In long and heavy through trains there is not the same necessity for making up in "station order" as in the case of short trains performing local service. Instructions are therefore commonly given for the distribution of empty cars through the long train to prevent the possibility of the slack "bunching." Moreover, air-brake manufacturers have anticipated non-observance of such instructions and furnish a "light and load" brake which maintains the same relative braking power upon the empty car as upon the loaded car.

Again, it is pointed out that emergency stops are less frequent

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with long and heavy trains than with short trains, because of the nature of their customary service and because of the rights allowed them on the road; that air brake hose does not regularly burst and set brakes suddenly; that enginemen are invariably instructed, in applying brakes, to manipulate the controlling valve with regard to the length and weight of the load behind the tender. If the brake is properly manipulated, there is no reason why in ordinary service a long train should not be brought to a stop with little or no shock and without undue strain upon car sills or draft gear. It thus appears that, because the service in which long trains are ordinarily engaged is of such a character that stops are infrequent and the speed is lower, the occasions and conditions in which sudden stops might produce buckling are few. In ordinary stops the situation is entirely within control of the engineman, whose skill and carefulness are the determining factors.

So far as strains upon brake apparatus are concerned, it is asserted, the argument is in favor of the long train. Short trains ordinarily move at higher speed between stops than long trains and in stopping subject brake equipment to more severe strains.

A method of administration could hardly be defended which should prepare for the *occasional* situations in which emergency stops might be disastrously made, or for *occasional* carelessness on the part of the engineer in ordinary stops, by restricting, in *all cases*, such an important factor of railway operating efficiency as length of trains.

Detection of Broken Car Rigging En Route.

The argument for limiting train length on the ground that breakages in draft gear or brake rigging, or other defects, occurring on the road are more liable to escape detection in long trains than in short, has this weakness. The risk claimed from this source may be regarded as due either to more frequent breakages en route under the strain of long trains, or to greater difficulty of detecting such as do occur, in view of the length of the train to be inspected in the time available during stops. With respect to the first view, it is claimed that the proper remedy,—already being applied,—is to continue the steady improvement in the strength of equipment and the steady substitution in long trains of newer and stronger cars for older and weaker ones. In this view, the risk, whatever it may be,

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is temporary. With respect to the second point of the argument, rigid terminal inspection of trains before departure leaves for consideration only breakages that develop on the road. As to these, it is to be noted that they occur under the sudden strains of such operations as stopping, starting, and backing; and that, in the service in which long trains are used, these operations are relatively infrequent. Hence the conclusion is reached that whatever the additional risk of a permanent character from the difficulties of inspecting long trains may be, it cannot be of an appreciable amount, and thus would be far from justifying the policy of a limitation of train length.

Possible Promptness of Control of Long Trains.

The final argument for limiting train length is that long trains can be stopped or started only with comparative slowness. Hence, in any of these recurrent situations in which a collision or some other accident is impending and can be avoided by promptly stopping a moving train, or starting one at rest, the chance of avoiding such an accident is reduced by the greater time necessary with a long train to perform the needful movement. This claim is true to the extent that brakes must be applied to long trains more gradually than is permissible with short ones, in order to avoid danger of buckling, as already explained, and to the extent that a heavy train cannot be gotten under way so promptly as a light one. But, as between a train of nearly fifty cars and one of many more than fifty cars, there should ordinarily be no difference in the requirement of careful manipulation of brakes. A sudden or severe application is not permissible in either case except in emergency. Then the emergency must be met regardless of the length of train. Over against the additional risk from this source, railway men strongly urge that there should be considered the great increase in the number of threatening situations that would follow the multiplication of trains on the road, if their length is limited, in order to move the same volume of business. This point is developed more fully later on. But it needs no explanation to see that if the *opportunities* for accidents are increased, the additional accidents actually happening on that account may well be far in excess of the number that would be avoided through the greater mobility of short trains.

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Conclusion.

The foregoing general analysis of the arguments against long trains shows the following weakness to be common to all except the last. The hazard in train operation lies mainly in maneuvering—in starting, stopping, backing and switching—and in speed. But the service in which long trains are used is one in which these operations are relatively infrequent, and in which the trains run at a more uniform speed, which is slower than that commonly attained by shorter trains in local and way service. Therefore, it is considered obvious that the maximum possible effect that the length of the trains in through service can have on that large proportion of casualties which arise from train operations is less than might at first seem possible in view of the arguments advanced.

This conclusion will appear, also, from an examination of such data as are available for making a comparison of the number of casualties with long and short trains. Entirely pertinent statistics showing the comparative measure of risk in the operation of long and short trains are not available. There are, however, some statistics that have an important bearing on the question.

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STATISTICS REGARDING COMPARATIVE NUMBER OF ACCIDENTS TO LONG AND SHORT TRAINS.

The advocates of train-limit legislation support their principal claim that long trains have caused an increase in accidents by reference to the accident statistics of the Interstate Commerce Commission. But no definite and relevant comparisons have been produced by them to show that such casualties have shown a tendency to increase with the increase in length of trains. The extent to which such statistics have been employed is limited usually to general statements that casualties due to railway operations are increasing from year to year. When more specific and definite comparisons have been made, they have failed to distinguish accidents that might, on the basis of their general reasoning, be considered as possibly related to long trains and accidents that cannot, on any reasoning whatever, be even remotely affected by long trains. It ought to go without saying that, to prove anything concerning the danger asserted to lie in long trains, the statistics offered in proof must be limited to accidents of such a nature as can be seen to have some relation to the length of the train, and must cover sufficient time and sufficiently varied conditions to be representative of actual tendencies and not abnormally affected by temporary or local influences.

An example of neglect in all these respects is found in accident statistics offered by representatives of the Brotherhood of Railway Trainmen, who appeared at a hearing before a committee of the Kansas legislature in February, 1915, in support of a bill limiting trains to not more than fifty cars. They stated that, according to the quarterly Accident Bulletin of the Interstate Commerce Commission for July, August, and September, 1901, 366 employees were killed and 1,679 employees were injured during the quarter; and that, according to Accident Bulletin No. 51, for the months of January, February, and March, 1914, 752 employees were killed and 37,315 were injured during that quarter.

The first thing to note about these citations is that they are inaccurate statements of what the Interstate Commerce Commission bulletins show. The 366 killed in 1901 were *trainmen* only. The number killed, among *all employees*, was 615. The number stated as the injured does not appear in any of the tables in the Bulletin

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cited. Of trainmen alone, there were 4,619 injured, and of all employees there were 8,361 injured. In 1914, the figures quoted include all those casualties in railway shops, or otherwise than in purely railway occupations, known as "Industrial accidents," which were not reported by the Interstate Commerce Commission in 1901, but had become a part of the returns by 1914. These amounted to 79 killed and 24,679 injured. To get statistics that are really comparable with those for 1901, all such industrial accidents—which can be in no way whatever affected by the length of trains—must be omitted. That leaves 673 killed and 12,636 injured in the first quarter of 1914, to be compared with 615 killed and 8,361 injured in the third quarter of 1901.

Even after correcting these inaccuracies, and taking only the statistics just given as more nearly representing the *same classes* of employees in the two years, the statistics are still without significance for the claim that the growth of long trains has caused an increase in casualties. In the first place, three months, or even a full year, for that matter, is far too short a time to reveal a surely representative picture of *average* conditions. And in this case, the two periods were most unhappily chosen. The three months of July, August, and September, 1901, were the very first three months of the existence of the department of the Commission that studies accident reports and prepares the accident Bulletins. It is conceded by everybody that the statistics gathered during, not only the first three months, but the first year or so, were distinctly incomplete because the organization for gathering, sifting, and compiling them was not fully worked out for some time. It will be clear to everyone, then, that no significance for the present question can attach to a comparison between the first quarter's reports and the latest quarter's reports in the Accident Bulletins of the Interstate Commerce Commission.

But the comparison cited is even more fundamentally defective in that it neglects to distinguish between accidents fairly subject to inquiry as to whether affected by the length of trains, and accidents that can have only a very remote relation to length of trains, if any at all. There are many trainmen injured who have nothing to do with long trains, and many of the casualties to employees who are connected with trains are in no way due to the length of the trains. Yard trainmen, for example, have nothing to do with trains on the

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road, but handle long trains in yards only when such trains are in separate sections.

Therefore, it hardly needs to be argued that such comparisons of casualties prove nothing as to the increase in danger claimed to have followed the growth in number of long trains. The increase in total casualties to trainmen may just as well have been due to many causes in no way related to length of train as to causes that may possibly be so related; and the increase may just as well have occurred while there was an actual decrease in the number of casualties to those employees whose risk, it is claimed, is affected by the length of the trains.

Even though allowance be made for all these classes of employees, and the statistics limited to casualties to trainmen on the road (who, of all employees, can most reasonably be assumed to be affected by train length), still the comparison would prove nothing, because so many of the casualties even to trainmen are due to causes in no way connected with length of train, and because no separation is made between casualties to trainmen on long trains and those to trainmen on short trains. Statistical verification of the claim that long trains are more hazardous to operate than short trains would require, at the very least, that the data for casualties in connection with long trains be separated from those in connection with short trains, both classes of trains being operated under substantially the same conditions. Otherwise no comparison is possible between the risk attendant upon each class of trains in itself. But this need is not met by any statistics regularly reported by the Interstate Commerce Commission, because the distinction between long and short trains has never been observed in its compilations.

In the absence of such comprehensive data, various railways have classified the casualties on their lines according as they occurred on long or short trains, and have presented the results at hearings before legislative committees that have considered bills for limiting train length. Several of these statements are significant, though the data are so arranged that they are not readily comparable with each other. At a hearing before a committee of the General Assembly of Virginia on a bill proposing to limit all freight trains to 50 cars, N. D. Maher, vice-president of the Norfolk & Western, presented a statement for that road covering a period of two years showing the number of trains of over and under 50 cars and the

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number of deaths and injuries resulting from their operation. The statistics were as follows:

Trains and Train Mileage.

Number of trains of more than 50 cars (freight)..... 16,712
Number of trains of 50 cars or less (including passenger)..... 31,112

Total mileage of freight trains of more than 50 cars..... 4,173,027 miles.
Total mileage of trains of 50 cars or less (including passenger trains) ..... 7,770,293 miles.
Total passenger train mileage..... 5,137,293 miles.
Total mileage of freight trains of 50 cars or less..... 2,633,000 miles.

Casualties to Employees.

Trains of more than 50 cars..... killed 1, injured 179
Trains of 50 cars or less.....killed 20, injured 521

Casualties to Other Than Employees.

Trains of more than 50 cars..... killed 8, injured 16
Trains of 50 cars or less..... killed 76, injured 193

Of the 20 deaths and 521 injuries to employees caused by trains of 50 cars or less, 5 deaths and 114 injuries resulted from the movement of passenger trains, leaving 15 deaths and 407 injuries due to the movement of freight trains of 50 cars or less.

In the cases of persons other than employees, 24 deaths and 42 injuries caused by trains of 50 cars or less resulted from the movement of passenger trains, leaving 52 deaths and 151 injuries caused by freight trains of 50 cars or less. There were thus in the two years 9 persons killed and 195 injured by freight trains of more than 50 cars, and 67 persons killed and 558 injured by freight trains of less than 50 cars.

The distribution of casualties between the two classes of trains, compared with the distribution of number of trains between the two classes, including all trains, is then as follows:

Percentage Distribution of Trains and Casualties.

(Norfolk & Western.)

Class of trains.	Number of trains.	Per cent of total.	Number killed.	Per cent of total.	Number injured.	Per cent of total.
Trains of more than 50 cars.....	16,712	35	9	8.6	195	21.5
Trains of 50 cars or less	31,112	65	96	91.4	714	78.5

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It appears from this comparison that, while there were more than one-half as many trains of over 50 cars as of trains of 50 cars or less, including passenger trains, the number of fatalities in connection with the long trains was less than one-tenth of the number in connection with the short trains, and of injuries slightly more than one-fourth. This discloses in a general way that the casualties on long trains were relatively fewer than on short trains. By how much fewer is more forcefully and definitely apparent when it is stated that, *for an equal number* of long and short trains, the number of persons killed in connection with long trains on the Norfolk & Western was only about one-sixth of the number killed in connection with short trains, while the number injured was only one-half as many.

The data in this case are complete enough to permit casualties to passengers and employees to be considered separately and with relation to the mileage of each class of trains. The results can also be distinguished as between the passenger and freight service. Eliminating from the calculation the numbers of casualties in connection with the movement of passenger trains and relating the remaining numbers of casualties, connected with freight service, to the mileage of the two classes of freight trains, the result is as follows:

Percentage Distribution of Freight Trains and Casualties.

(Norfolk & Western.)

Class of trains.	Mileage.	Per cent of total.	Employees.			
			Killed.	Per cent of total.	Injured.	Per cent of total.
Freight trains of more than 50 cars	4,173,027	61.3	1	6.2	179	30.5
Freight trains of 50 cars or less.....	2,633,000	38.7	15	93.8	407	69.5

Class of trains.	Passengers.			
	Killed.	Per cent of total.	Injured.	Per cent of total.
Freight trains of more than 50 cars.	8	13.3	16	9.6
Freight trains of 50 cars or less..	52	86.7	151	90.4

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In this comparison it appears that, though the mileage of freight trains of more than 50 cars was 61 per cent of the entire mileage of freight trains, the number of fatalities to employees in connection with these trains was only 6.2 per cent of the total number, and fatalities to passengers only 13.3 per cent of the total. Put in more definite terms, the data show that, *for an equal number of miles run* by long and short trains, the number of employees killed in connection with long freight trains was less than 5 per cent of the number killed in connection with short trains, while the number injured was only 28 per cent.

During a hearing before a committee of the Virginia Assembly, George P. Johnson, then general manager of the Chesapeake & Ohio, presented a statement relating to that road and covering a service of 4,896,326 train-miles for the year ending June 30, 1913, showing the relative numbers of casualties resulting from the operation of trains of more than 50 cars and of trains of 50 cars or less, as follows:

Percentage Distribution of Trains and Casualties.

(Chesapeake & Ohio.)

Class of trains.	Number of trains.	Per cent of total.	Number killed.	Per cent of total.	Number injured.	Per cent of total.
Trains of more than 50 cars..... ...	12,073	48	4	11.4	18	9.9
Trains of 50 cars or less.....	13,099	52	31	88.6	163	90.1

This statement shows that 12,073 trains, or 48 per cent of the whole number operated, consisted of more than 50 cars, and 13,099, or 52 per cent, consisted of 50 cars or less, including passenger trains. While the number of long and short trains was thus nearly equal, the number of fatalities in connection with the long trains was only one-eighth of the number in connection with short trains, and the number of injuries less than one-ninth as great.

A summary has been made by the railways operating in Illinois showing for the year 1913 the number of employees killed or seriously injured on all trains run in that state by 23 roads. These

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are subdivided to show the relation of numbers of casualties occurring in connection with the operation of trains of over 50 cars and trains of 50 cars or less. The data in detail are shown in the accompanying table:

Percentage Distribution of Trains and Casualties.

(Illinois Railways, 1913.)

Class of trains.	Number of trains.	Per cent of total.	Number killed.	Per cent of total.	Number injured.	Per cent of total.
Trains of more than 50 cars....	236,702	36	23	34.8	46	23.6
Trains of 50 cars or less.....	413,510	64	43	65.2	149	76.4

Here again, though the number of trains of more than 50 cars was 57 per cent as great as the number of trains of 50 cars or less, the number of fatalities in connection with the long trains was only 53 per cent as great as in connection with the short trains, and the number of injuries less than one-third as great. Or, put differently, for the same number of trains of each class, the number killed in connection with long trains was only about nine-tenths of the number killed in connection with short trains, while the number injured was only about one-half.

It may be argued that statistics of this character are not conclusive because of the difference in the character of the services performed by the two classes of trains. Reference is made to the fact that short trains include all local and way service trains in connection with which the service performed by trainmen includes sources of risk not found in the same degree in the through service performed by long trains. But if, as this argument concludes, long trains are used in a class of service in which, owing to its character, the risk of accident is relatively less, it follows that this particular argument gives relatively little or no ground for legislation to reduce the length of the trains used in this service.

Furthermore, the fact that there are elements in the character of the service ordinarily performed by short trains that render their

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operation more liable to produce casualties, it is explained by the opponents of train-limit legislation, would argue for a possible increase in casualties if short trains were substituted for long ones. The long train ordinarily moves at a regular rate of speed, which is slower than the speeds often attained by short trains. It ordinarily makes fewer stops, and therefore incurs less risk of accidents in starting and stopping. If train length were restricted as proposed, the shortening of trains would necessarily increase those risks of accident which arise from the operation of relatively short trains at higher rates of speed.

Analysis of the Causes of Accidents, with Respect to the Effect of Long Trains.

That long trains do not tend to increase the risk of accidents in any material degree, if at all, is indicated, not only by the general considerations previously stated, but also by an analysis of the causes of accidents to trainmen, as assigned in the statistics of the Interstate Commerce Commission. The causes of accidents to trainmen, as reported by the Commission, fall into fifteen principal classes. Casualties classified according to cause, with sub-classes in the case of such main classes as could, by any possibility, be affected by the length of trains, are presented in Table V following, which applies to the fiscal year ended June 30, 1915. In the table, those immediate causes are italicized which may be reasonably considered as having been themselves due to length of train in more than rare instances. Casualties to trainmen, only, are given because they are more likely to be influenced by the length of trains than are accidents to any other class of persons. In the case of collisions and derailments, the Commission does not classify the casualties in detail according to causes.

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TABLE V.

Causes of Casualties to Trainmen.

Year Ended June 30, 1915.

Cause.	Number of accidents.	Number of casualties to trainmen.	
		Killed.	Injured.
1. Collisions	3,538	60	1,199
a. Rear[1] (p. 30)[2]	435	.....	.....
b. Butting[1] (p. 30)	282	.....	.....
c. Trains separating (p. 30)	303	.....	.....
d. Miscellaneous (p. 30)	2,518	.....	.....
2. Derailments	6,849	114	1,174
a. Defects of roadway (p. 32)	1,507	.....	.....
b. Defects of equipment (p. 32)	3,416	.....	.....
(1) Broken or burst wheel	335	.....	.....
(2) Broken flange	346	.....	.....
(3) Loose wheel	100	.....	.....
(4) Miscellaneous wheel defects	86	.....	.....
(5) Broken or defective axle or journal	367	.....	.....
(6) *Broken or defective brake rigging*	390	.....	.....
(7) *Broken or defective draft gear*	280	.....	.....
(8) Broken or defective side bearings	141	.....	.....
(9) Broken arch bar	222	.....	.....
(10) Rigid trucks	177	.....	.....
(11) *Failure of power brake apparatus, hose, etc.*	353	.....	.....
(12) *Failure of couplers*	219	.....	.....
(13) Miscellaneous causes	400	.....	.....
c. Negligence of trainmen, signalmen, etc. (p. 30)	297	.....	.....
d. Unforeseen obstruction of track, etc. (p. 30)	244	.....	.....
e. Malicious obstruction of track, etc. (p. 30)	70	.....	.....
f. Miscellaneous causes (p. 30)	1,315	.....	.....
3. Accidents to trains, cars or engines, except 1, 2 and 4 (p. 24)	.....	4	203
4. Bursting of, or defects in, locomotive boilers, etc. (p. 24)	.....	13	429
5. Accidents to roadway or bridges not causing derailment, such as fires, floods, landslides, etc. (p. 24)	.....	.....	.....

[1]Some rear-end collisions may conceivably have occurred to long trains after being forced to stop by reason of breakage due to their great length. Some rear and butting collisions may conceivably have happened because of greater delay in stopping or starting trains of great length. But it is not believed, as a practical matter, that such accidents could have been numerous enough to deserve recognition in this table.

[2]Page numbers refer to I. C. C. Accident Bulletin, No. 56 (1915).

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Cause.	Number of accidents.	Number of casualties to trainmen.	
		Killed.	Injured.
6. Coupling or uncoupling cars (exclusive of accidents with air or steam hose) (p. 33).....	.....	88	1,949
a. Adjusting coupler with foot..	.....	.....	176
b. Adjusting coupler, cars accidentally started	.....	4	60
c. Careless manipulation of uncoupling lever	.....	.....	39
d. Cars not equipped with automatic coupler	.....	.....	2
e. Coupler broken, using link and pin or chain.....	.....	5	35
f. Coupling damaged cars.....	.....	2	43
g. Coupling with chain or other emergency appliance on curve too sharp for automatic coupling	.....	.....	16
h. Coupling with chain or other emergency appliance because of uneven track.....	.....	.....	.....
i. Coupling or uncoupling safety chain	.....	2	28
j. Fingers or hand caught between uncoupling lever and body of car.....	.....	.....	309
k. Uncoupling without using lever (unnecessary)	.....	.....	38
l. Uncoupling without using lever (lever out of order).	.....	4	107
m. Foot caught in frog, switch, or guard rail.....	.....	4	22
n. Opening or closing knuckle when cars were near together, miscalculated speed.	.....	15	160
o. Opening knuckle when cars were near together, engine accidentally started	.....	9	93
p. Opening knuckle, part of defective coupler fell on foot.	.....	.....	54
q. Opening knuckle, lost footing	.....	4	68
r. Riding on car to uncouple, slipped off	.....	4	45
s. Struck by object at side of track	.....	1	41
t. Caught by unexpected movement of car, due to slack running in	.....	12	155
u. Caught by unexpected movement of car, due to misunderstanding in giving hand signals	.....	3	27
v. Uncoupling moving cars and lost footing	.....	6	125

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Cause.	Number of accidents.	Number of casualties to trainmen.	
		Killed.	Injured.
w. Parts hard to move, causing delay	.....	1	45
x. Went between cars unnecessarily and contrary to rule.	.....	8	82
y. Hand caught between projecting load and end of next car	.....	.....	9
z. No witness (fatal accident)	.....	4	.....
aa. Other causes	.....	.....	112
bb. Unexplained	.....	.....	58
7. While doing other work about trains (not in shops or engine houses) or while attending switches (p. 35)	.....	76	17,770
a. Shaking grates	.....	.....	704
b. Firing engine (raking fire, shoveling coal into fire, etc.)	.....	.....	1,831
c. Coaling engine	.....	1	238
d. Taking water at water cranes	.....	1	440
e. The working or action of reverse levers	.....	.....	542
f. Scalded by water from squirt hose	.....	.....	219
g. Throwing switches	.....	.....	838
h. Poling cars	.....	.....	128
i. Coupling or uncoupling air or steam hose (includes the turning of angle cocks)	.....	12	412
j. *Using hand brakes*	.....	*1*	*1,098*
k. Loading or unloading freight, baggage, etc.	.....	1	1,463
l. Cinders in eye	.....	.....	1,060
m. Stepping on or stumbling over objects, stepping in holes, slipping, etc., on or at side of track	.....	18	3,384
n. *Unexpected or abnormal movement of trains, cars, or engine*	.....	*23*	*2,082*
o. Struck by objects on or at side of track (not fixed structures)	.....	1	189
p. Struck while riding in or on trains, cars, or engines, by trains, cars or engines on adjoining track	.....	4	309
q. Struck while riding in or on trains, cars, or engines, by projections from trains, cars or engines on adjoining track	.....	2	102
r. Miscellaneous	.....	12	2,731

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Cause.	Number of accidents.	Number of casualties to trainmen.	
		Killed.	Injured.
8. Coming in contact, while riding on cars, with overhead bridges, tunnels, or any signal apparatus, or any fixed structure above or at the side of the track (p. 24)	.....	44	1,039
9–10. Falling from, or getting on or off, cars or engines (p. 34)	.....	304	10,050
a. Fell from roof of box car by reason of—			
(1) Defect in car	.....	1	56
(2) Ice or snow	.....	5	81
(3) *Parting of train*	.....	*7*	*69*
(4) *Derailment, collision, or shock due to abnormal movements of cars other than those under 3 preceding*	.....	*25*	*630*
(5) *While setting brakes*	.....	*30*	*605*
b. Fell from—			
(6)–(7) Freight car other than box car	.....	25	345
(8) Engine or tender	.....	45	734
(9) Passenger car	.....	4	68
(10) Engines, tenders, or cars (all kinds) at rest	.....	5	538
(11) Miscellaneous causes	.....	33	1,064
(12) Not clearly explained	.....	73	144
(13) Slipped getting on moving trains or cars	.....	25	1,018
(14) Jumping off moving trains	.....	9	*2,072*
(15) *Jumping from engines or cars anticipating collision, derailment, or other accident*	.....	*1*	*272*
(16) Fell from engines or cars by reason of defective handholds and sill steps	.....	.....	416
(17) Getting on or off moving engine	.....	16	1,918
(18) Caught in frog, guard rail, or switch	.....	.....	*20*
11. Other accidents on or around trains (p. 24)	.....	.....	11
(Only one of twelve subclasses of causes appears to have any possibility of connection with train-lengths, viz: "Unexpected or abnormal movement of trains, cars, or engines" (p. 35).			

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Cause.	Number of accidents.	Number of casualties to trainmen.	
		Killed.	Injured.
12. Being struck or run over by engines or cars at stations or yards (p. 24).....	.....	136	387
13. Being struck or run over by engines or cars at highway grade crossings (p. 24).....	.....	.....	.....
14. Being struck or run over by engines or cars at other places (p. 24)	.....	42	38
15. Other causes (p. 24).....	.....	3	52

To show the number and percentage of casualties from those causes which may, in some instances, have been a result of length of trains, the data in the foregoing table are summarized in Table VI as follows:

TABLE VI.

SUMMARY OF CAUSES OF CASUALTIES.

Year Ended June 30, 1915.

Causes.	Number of accidents.	Number of casualties to trainmen.	
		Killed.	Injured.
Total casualties from causes other than collisions and derailments.....	.....	710	31,928
Total casualties from accidents, other than collisions and derailments, of which *some* might have been due to length of trains.	.....	109	5,070
Per cent such casualties were of all casualties from causes other than collisions and derailments.....	.....	15.4	15.9
Total collisions and derailments.....	10,387	....	....
Total from causes, of which *some* might have been due to length of trains.....	1,545	....	....
Per cent such accidents were of all collisions and derailments.....	14.9	....	....
Total casualties from collisions and derailments	.....	174	2,373

It appears, then, that of the total number of collisions and derailments in 1915, only 1,545, or 15 per cent, might conceivably have been due in some cases to the length of the trains. But the actual number of such accidents assignable, on any reasonable theory, to

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the length of trains can be only a fraction of this number, for not all of these collisions and derailments happened to long trains, because long trains constituted only a small portion of all trains. Most trains are either passenger trains or short freight trains. The average number of cars per freight train in 1914 was only 34.3, showing a large majority of trains to have had less than 50 cars,[1] the usual arbitrary division point between long and short trains. Further, it is highly improbable that more than a part of such long trains as suffered collisions or derailments did so by reason of any cause due to their length. It is therefore not easy to see how length of trains could have been a determining cause of collisions or derailments in any but a very small percentage of the total cases.

Considering casualties to trainmen from causes other than collisions and derailments, it appears that the total casualties from these other causes that could possibly, on any hypothesis, have been affected by the length of trains, were 109 killed and 5,070 injured, or 15.4 and 15.9 per cent, respectively, of all the casualties from such causes. As a matter of fact, however, these causes also operate independently of the length of trains; they have many more occasions to operate in connection with the much more numerous short trains; and the number of casualties from these causes which conceivably might have been due to long trains, if any at all, must be much larger than the number that actually were due to them.

When the general arguments offered to support the claim that long trains, considered as operating units, augment accidents are thus examined in the light of an analysis of the causes of accidents, the potential influence of long trains on the number of casualties is seen to be, at most, only a negligible matter.

The Human Factor in Accidents.

It appears from other evidence that a large percentage of accidents to trains is due to error or failure on the part of employees. From this it is argued that an increase in the number of trains, and

[1] If all mathematical possibilities be considered, the fact that the average of a number of items is less than some stated amount does not necessarily show that the majority of all the items are less than that amount. But, in view of the high probability that the number of trains within successively lengthened limits does not uniformly increase as rapidly as those limits, the statement in the text can hardly be questioned.

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therefore, in the number of employees, beyond what experience has shown to be necessary for the movement of a given traffic, would be attended by an increase in accidents to trains as well as to employees. During the 13 years, 1902 to 1915, the Interstate Commerce Commission investigated directly through its own agents 1,635 train accidents which were responsible for the death of 4,062 persons, or about one-third the total number killed in train accidents during this period, and for the injury of 23,981 persons, or over one-eighth of the total number injured in train accidents. The Commission found that 1,150 of these accidents were due to negligence, mistakes or other failures of employees, 240 to mechanical defects of track, equipment, signal system or air-brake apparatus, and the remainder to weather conditions, outside interference, parting of trains, miscellaneous and unknown causes. Of the whole number investigated, therefore, 70 per cent were due to error or failure on the part of the personal element concerned in train operation. Only 152 of the accidents, or less than 10 per cent of the total, could reasonably be connected with the length of trains, namely, 110 cases of defective or weakened equipment (which may or may not have been due to train length), 31 cases of air-brake failure (which again may not have been due to train length), and 11 cases of train-parting. These 152 accidents represent virtually all that could reasonably be attributed to a large number of cars per train. That this is the case becomes even clearer when it is noted that the 1,635 accidents include those in which passenger as well as freight trains were involved.

Table VII, following, gives in detail the causes to which these accidents were attributed by the Commission:

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TABLE VII.

CAUSES OF PRINCIPAL TRAIN ACCIDENTS ON RAILWAYS OF UNITED STATES, FISCAL YEARS 1902 TO 1915, INCLUSIVE.*

	Number.	
Fault of train crew:		
Disobedience of rules or orders	83	
Misread orders	70	
Excessive speed	154	
Carelessness	114	
Failure to heed signal	80	
Ran past meeting point	39	
Forgetfulness	49	
Asleep	40	
Failure to follow schedule	35	
Intoxication	5	
Failure to flag	74	
Improper flagging	40	
Failure to set brakes	41	
Other errors	7	
Total		831
Fault of dispatchers, operators, etc.:		
Wrong orders	93	
Failure to deliver orders	73	
Switch misplaced	65	
Wrong signal	62	
Other errors	4	
Total		297
Fault of other employees		22
Mechanical defects:		
Defective or weakened track	95	
Defective or weakened equipment	110	
Failure of air-brakes	31	
Failure of block signals	4	
Total		240
Hostile weather conditions		70
Malicious interference with track or equipment		46
Parting of trains		11
Miscellaneous causes		39
Causes uncertain or unknown		79
Total		1,635

* Compiled from Quarterly Accident Bulletins, Interstate Commerce Commission, 1902-1915.

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Recapitulation.

The results of the foregoing review of the claim that long trains are more hazardous operating units than short trains may now be summarized.

It has been shown how comparatively few are the occasions in through freight service when length of train may be a source of *additional* risk; also how far even this limited additional risk is remediable, and is in course of being remedied, by the use of care and by improvements in equipment. From this it appears that the most in the way of irremediable risk that can fairly be chargeable to length of train is far too small, in view of other more consequential sources of risk, to be singled out for special and drastic treatment.

Further, an analysis of the available comparative casualty statistics for long and short trains, while disclosing that the statistics are not adequate to disprove the claim that long trains are more hazardous to operate than short ones would be in the same service, nevertheless shows the data to be in entire agreement with a denial of that claim. It further shows that the casualty risk attendant upon long trains is a noticeably smaller matter of concern than the casualty risk attendant upon short trains. Of this less amount of risk in connection with long trains, the part that is especially due to the greater length of such trains, whatever it may be, has been shown by the analysis of the general arguments to be at most a relatively small part. Much more, then, considering the general arguments and these statistics together, must the hazard that can be assignable to the length of such trains be of relatively small concern.

This conclusion was corroborated by a detailed consideration of the nature and possible relation to train length of each of the various causes of accidents or casualties. This showed that the accidents or casualties from all causes that might, on any reasonable explanation, be considered as sometimes due to length of train amount, at the very most, to but 15 or 20 per cent of all accidents or casualties. Account was then taken of the fact that these causes operate on short trains, as well as long ones, and even on long trains operate many times quite independently of the length of train. Allowance for these facts shows that the percentage of casualties actually at-

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tributable to the length of trains must, in fact, be much smaller than the above percentage.

Finally, the dominating influence of the human factor, as shown by the proportion of casualties attributable to carelessness, negligence, or other failures of employees, shows that of all accidents or casualties from causes that *might* conceivably have been due to length of train, and therefore avoidable by reducing train length, only a part could have been actually due to that cause, and so have been prevented if trains had all been short ones.

The proposition, then, that long trains are more hazardous units to operate than short trains, fails to find a significant amount of support in either the general considerations or the available specific statistical data that bear upon it. Whatever special risk there may be, not otherwise remediable, is of such minor importance that the limitation of train length is seen to be a remedy entirely out of proportion to the actual diminution of risk that would be obtained thereby, if indeed any at all would follow.

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THE EFFECT OF INCREASED TRAIN DENSITY UPON THE RISK OF ACCIDENT.

Why Increased Density Tends to Increase Accidents.

The arguments for and against train-limit legislation stated in the foregoing section have related solely to the relative safety of long and short trains considered as separate units. But such arguments are not conclusive, because they fail to take account of the more inclusive transportation problem involved. Even if it could be proved that there is less danger of accident in connection with the operation of one train of 50 cars than in connection with the operation of one train of 75 cars, this would not in itself prove that trains should be limited to 50 cars.

It is obvious that if the length of freight trains is limited by law, the freight that is now carried in that portion of trains that would be in excess of the limit will have to be otherwise provided for. It could not to any appreciable extent be provided for by trains that are now shorter than the maximum proposed to be prescribed. Many of the shorter trains are those that move in a direction that is for the time being opposite to the principal flow of traffic. They must be run with regularity regardless of the amount of business available. Many others are operated in a service in which the higher rate of speed possible with short trains is an element of efficiency. Classification of trains is essential to the expedited movement of high-class merchandise, livestock, and perishable commodities. Ordinarily no part of a possible long train can be left for attachment to a shorter train whose assigned service is of a different character. Classification enables the dispatcher to give certain trains the individual movement required by the nature of their service. Otherwise the movement of certain commodities would be dangerously delayed and the movement of others unnecessarily accelerated; both to the detriment of efficiency of service. In only a small percentage of cases could the excess cars, under a limit fixed in disregard of economic conditions of service, be cared for otherwise than by an increase in the number of trains. A result, then, of a limitation of train length would be an increase in the number of trains beyond what would otherwise be necessary.

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But an increase in the number of trains involves other important considerations in the matter of safety. Suppose there are 150 cars to be moved in each direction. There enters here the question of the relative safety of operating two trains of 75 cars in each direction or three trains of 50 cars in each direction. In the first case there will be four meeting points; in the second, nine. In other words, in the first case there are four chances of butting collisions in handling the given number of cars; in the latter case, there are nine chances. Of course, strictly speaking, when trains are numerous, each one does not meet all the others, because some will reach their terminal before others have started. But it is obvious that the chances of collision increase much more rapidly than the number of trains.

A suggestion of the classes of risks other than of collisions that would be increased by an increase in number of trains is given in an illustration furnished by M. W. Potter, president of the Carolina, Clinchfield & Ohio, at a hearing before a committee of the General Assembly of Virginia. He says: "Suppose you have 48,000 tons you want to move over a section in a day. You may move that with sixteen 3,000-ton trains or eight 6,000-ton trains, four going each way. If you move that business in eight 3,000-ton trains each way, or 16 trains in all, you would have 64 meeting points in handling 48,000 tons. If you move that same tonnage in eight trains, four trains each way, you would have only 16 meeting points. As you increase the number of meetings for a given tonnage you increase the complexity of operation and the danger of accidents all along the line. Sixty-four meetings, instead of 16, means four times the danger in transmitting orders and giving signals; four times the danger of derailments in going into and out of sidings; four times the stops; four times the application of brakes; four times the sudden strain, wear and tear; four times the danger of congestion and liability of collision." This simple illustration is based on the assumption that each train would meet every other train. Even though this does not happen in actual practice, it is plain that all the risks enumerated would be increased more than in proportion to the increase in the number of trains.

Another aspect of the increase in risk attendant upon increase in train density relates to grade crossing accidents. Accidents at grade crossings obviously bear a close relation to the number of

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trains, as well as the number of persons using the crossing. During the twelve months ended June 30, 1915, 1,086 persons were killed and 2,981 persons injured at grade crossings. The great majority of these persons, or 997 of those killed and 2,898 of those injured, were neither railway employees nor trespassers; that is, they were presumably persons who were utilizing the crossings in the course of their usual activities. The more trains that are run, the more chances there will be of injury to persons at highway crossings.

In support of their claim that a limit upon train length would cause an increase in the number of trains, railway men point to the fact that the increase in the *length* of trains has restricted the increase in the *number* of trains. This is strikingly shown by the statistics of the Interstate Commerce Commission. The number of tons of freight carried one mile in the United States in 1914 was nearly four times as great as in 1894, and from 1904 to 1914 the increase was 65 per cent. *Density of freight business,* or ton-miles per mile of line, increased 36 per cent during the same ten-year period. On the other hand, *freight train* density—which expresses the degree to which the railway is crowded with freight trains, and is measured by the average number of freight trains run over each mile of line per year—*decreased* 3.8 per cent.

If it had not been for the increase in trainload, largely a result of increase in length of train, this growth of traffic would have caused a corresponding increase in train density. It follows that if the length of trains be now limited, considerable increase in number of trains would be required to handle the volume of business now carried by the railways, while increase in all the hazards of operation would follow such an increase in train density.

Statistical Evidence of the Relation of Accidents and Casualties to Train Density.

Even if it were admissible that the absolute number of fatalities and injuries to any or all classes of persons resulting from railway operation showed an increase from year to year, it would not necessarily prove that the character of railway operation is becoming increasingly dangerous. It has been shown in a preceding section that the public service performed by railways has increased greatly

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within the last ten years. The tonnage of freight handled, the number of passengers carried, and the number of employees in railway service have greatly increased. It has been considered proper, therefore, in opposing attempts to secure train-limit legislation to introduce statistics tending to show such relation as may have existed in previous years between the number of casualties resulting from railway operation and train density, which is the important operating element affected by train limitation. There have also been made comparisons designed to show that the increase in volume of public service performed by railways in recent years has not been accompanied by corresponding increases in number of casualties resulting from train operation. The pertinency of this latter comparison rests upon the showing that the increase in volume of public service performed has been brought about by the use of long freight trains without a corresponding increase in train density.

The claim of railway men that the increase in train density which would follow a limitation of train length would cause an increase in casualties is amply proven from the relation between train density and accidents or casualties in the past.

While the increase in the number of trains run per mile of line is shown to have been very small in relation to the increase in the amount of freight handled, there have been years when there were sharp increases or decreases in the total number of freight trains run, due to fluctuations in the total amount of freight to be handled. These changes have caused corresponding increases and decreases in freight-train density. The effect on railway accidents produced by these increases in the number of trains run and the resultant increases in freight-train density is doubtless similar to that which would be produced by the increase in the number of trains that would be necessitated by legislation limiting and reducing the length of trains.

Considering the causes and occasions of various kinds of accidents and casualties, it would be expected that those most directly affected by train density would be such accidents as collisions, derailments and other accidents to trains, and such casualties, resulting from these accidents, as happen to persons employed on trains or riding on them, such as trainmen and passengers. Without doubt there are other accidents than those named and casualties to other persons than those named, that are affected by the degree of train density.

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But they are at the same time subject to so many other concurrent influences that the statistics of all such accidents and casualties do not show a regular dependence on the amount of the train density. However, the accidents and casualties first named are found, by statistical tests, to vary with train density in such a degree of uniformity as to corroborate the conclusion that the rise and fall of train density must be accompanied by a rise and fall in the number of these accidents and casualties. Therefore, the claim of railway men that the limitation of train length will, by increasing train density to a greater amount than otherwise, cause a greater number of accidents and casualties than otherwise would occur, is fully supported by the statistics.

The data that prove that claim are here given in full. The statistical methods, however, by which the significance of the statistics is disclosed are rather technical to describe simply, and will be found in an appendix by those who wish to check them.

The train density considered in these tables is that of all trains. The advocates of train-limit legislation propose to limit the length of freight trains only. But it is the total number of trains of all kinds, and not merely of freight trains upon a given section of track, that affects the liability to accident. The effect of an increase in freight trains would thus be felt as an increase in all train density. In addition to this logical reason for considering the density of all trains is the practical one that the accident statistics compiled by the Interstate Commerce Commission include accidents resulting from the movement of all classes of trains. Therefore, the comparisons in the following tables are made on a basis to include all trains. For statistical purposes train service is represented by train-miles. The unit of freight-train service is the freight-train run one mile and the unit of passenger-train service is the passenger-train run one mile. Train density indicates the average number of these trains run one mile per mile of line per year. The relation of fluctuations in the total number of trains run one mile, and in freight trains run one mile, to the total number of collisions, derailments, and to casualties resulting therefrom, is instructive.

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Relation to Train Density of Collisions and Derailments.

In Table VIII are shown, in parallel columns, year by year from 1903 to 1914, the total train-mileage, density of all trains, the number of collisions and the number of derailments. Although statistics are available for 1902, they are omitted from this and the following tables because the data on accidents are admittedly incomplete. The increases from one year to another are indicated by "I" and the decreases by "D."

TABLE VIII.

RELATION TO TRAIN DENSITY OF COLLISIONS AND DERAILMENTS.*

Year.	Total train mileage.	Train density.	Collisions.	Derailments.
1903.....	982,946,284	4,848	6,167	4,476
1904.....	1,007,529,452 I	4,826 D	6,436 I	4,855 I
1905.....	1,038,441,430 I	4,839 I	6,224 D	5,371 I
1906.....	1,105,877,091 I	5,035 I	7,194 I	6,261 I
1907.....	1,171,922,997 I	5,211 I	8,026 I	7,432 I
1908.....	1,129,149,453 D	4,931 D	6,363 D	6,671 D
1909.....	1,112,452,351 D	4,776 D	4,411 D	5,259 D
1910.....	1,221,852,647 I	5,131 I	5,861 I	5,918 I
1911.....	1,237,500,138 I	5,081 D	5,605 D	6,260 I
1912.....	1,236,758,715 D	4,986 D	5,483 D	8,215 I
1913.....	1,280,931,735 I	5,090 I	6,477 I	9,049 I
1914.....	1,251,791,798 D	4,909 D	5,241 D	8,565 D

*Accident statistics are from Interstate Commerce Commission Accident Bulletins. Train-mile and train-density statistics are compiled from the Interstate Commerce Commission's annual Statistics of Railways in the United States.

This table shows that, during the twelve years covered, nearly every increase or decrease in the number of train miles run and in train density was accompanied by a corresponding increase or decrease in the number of collisions and of derailments.

It is recognized that agreement merely in the upward or downward direction of change is entirely inadequate, by itself, to prove that accidents and casualties depend on train density. But this agreement has been tested by more accurate statistical methods which are described in the appendix and has been found to be a real and not merely an apparent agreement. Consequently the simpler and more obvious method of presentation, in which corresponding changes in movement upward or downward are emphasized, has been followed in the text.

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The statistics thus support the claim of railway men that the increase in the number of trains that would be required if train length is restricted will surely cause an increase in the number of collisions and derailments, because it will increase the occasions or opportunities for such accidents.

It would be perfectly reasonable to expect, also, that an increase in train density would cause an increase in other accidents to trains besides collisions and derailments, as claimed in the quotation already given on page 40. But this cannot be tested statistically, because the Interstate Commerce Commission has not reported the number of such accidents for enough years to afford a representative period.

The available statistics of train accidents since 1911 show that the relationship for all train accidents closely follows that for collisions and derailments separately. This would be expected, for collisions and derailments form by far the greater proportion of all train accidents (ninety per cent in 1915), and naturally determine the trend of all such accidents.

Relation to Train Density of Casualties to Trainmen and Passengers.

Turning now to a consideration of casualties to persons, it would seem to follow from the effect of train density on accidents that the casualties, also, experienced in those accidents would increase with an increase of train density. And this deduction is supported by the statistics. In Tables IX, X, XI, XII, XIII, and XIV, are taken up the relationship between train-mileage and train density and casualties to passengers and to trainmen, respectively, resulting from the movement of trains.

In each of these tables is given a statement of total train-miles and of train density for each of the years 1903 or 1904 to 1914, inclusive. The items are marked with "I" or "D," showing whether the record for each year indicates an increase or decrease in train-mileage or train density as compared with the preceding year. In comparison with these data are presented in separate columns the number of killed and of injured in the corresponding year. These items are also marked with "I" or "D," indicating increase or decrease in number of killed or injured compared with the preceding year.

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As in the case of collisions and derailments, the relation of these casualties to train density has been proven by statistical tests. But, for simplicity in presentation, only the general agreement in increases and decreases is shown in these tables. In view of the many directions in which it has been sought, especially in recent years, to reduce the hazard of train operation, it was not to be expected that in every instance in which comparison was made there would be shown a complete correspondence of increase or decrease. But throughout most of the years there can be seen a rather complete agreement of increases and decreases when the data for any year are followed through the various columns in any of the tables.

Relation to Train Density of Casualties to Trainmen on the Road.

In the following three tables the variations from year to year in the number of casualties to trainmen on the road are compared with the variations from year to year in the train density. The statistics begin with 1904 because that was the first year when casualties to trainmen on the road were shown separately from casualties to all trainmen, including those in yard service. In Table IX are compared the casualties from collisions, and in Table X, those from derailments.

TABLE IX.

RELATION TO TRAIN DENSITY OF CASUALTIES TO TRAINMEN ON THE ROAD, OCCURRING IN COLLISIONS.*

Year.	Total train mileage.	Train density.	Casualties to trainmen. Killed.	Injured.	Total casualties.
1904....	1,007,529,452	4,826	267	2,077	2,344
1905....	1,038,441,430 I	4,839 I	259 D	1,922 D	2,181 D
1906....	1,105,877,091 I	5,035 I	331 I	2,348 I	2,679 I
1907....	1,171,922,997 I	5,211 I	364 I	2,702 I	3,066 I
1908....	1,129,149,453 D	4,931 D	191 D	1,832 D	2,023 D
1909....	1,112,452,351 D	4,776 D	145 D	1,266 D	1,411 D
1910....	1,221,852,647 I	5,131 I	216 I	1,765 I	1,981 I
1911....	1,237,500,138 I	5,081 D	184 D	1,634 D	1,818 D
1912....	1,236,758,715 D	4,986 D	186 I	1,740 I	1,926 I
1913....	1,280,931,735 I	5,090 I	162 D	1,824 I	1,986 I
1914....	1,251,791,798 D	4,909 D	128 D	1,031 D	1,159 D

*Accident statistics are from Interstate Commerce Commission Accident Bulletins. Train-mile and train-density statistics are compiled from the Interstate Commerce Commission's annual Statistics of Railways in the United States.

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TABLE X.

RELATION TO TRAIN DENSITY OF CASUALTIES TO TRAINMEN ON THE ROAD, OCCURRING IN DERAILMENTS.*

Year.	Total train mileage.	Train density.	Casualties to trainmen. Killed.	Injured.	Total casualties.
1904....	1,007,529,452	4,826	229	1,078	1,307
1905....	1,038,441,430 I	4,839 I	223 D	1,316 I	1,539 I
1906....	1,105,877,091 I	5,035 I	220 D	1,385 I	1,605 I
1907....	1,171,922,997 I	5,211 I	259 I	1,786 I	2,045 I
1908....	1,129,149,453 D	4,931 D	203 D	1,412 D	1,615 D
1909....	1,112,452,351 D	4,776 D	171 D	996 D	1,167 D
1910....	1,221,852,647 I	5,131 I	188 I	1,272 I	1,460 I
1911....	1,237,500,138 I	5,081 D	184 D	1,211 D	1,395 D
1912....	1,236,758,715 D	4,986 D	191 I	1,610 I	1,801 I
1913....	1,280,931,735 I	5,090 I	169 D	1,418 D	1,587 D
1914....	1,251,791,798 D	4,909 D	159 D	1,221 D	1,380 D

*Accident statistics are from Interstate Commerce Commission Accident Bulletins. Train-mile and train-density statistics are compiled from the Interstate Commerce Commission's annual Statistics of Railways in the United States.

The correspondence between casualties and train density, indicated in the foregoing tables and proven by more careful statistical analysis, is sufficiently close to substantiate the deductive claim of railway men that the increase in train density, which would follow a restriction of train length, will be sure to cause more casualties to trainmen than would otherwise occur.

The statistics of Tables IX and X are extended in Table XI following, to cover casualties to trainmen in all train accidents. This table shows the relation between increases and decreases in train mileage and train density and casualties to trainmen in train accidents, 1904 to 1914. While the total of train accidents includes some accidents not due to collisions or derailments, such as locomotive-boiler explosions, yet the correspondence between the showing of Tables IX and X, on the one hand, and Table XI, on the other, is very close. This is natural, considering the fact already noted, that collisions and derailments constitute a large proportion of all train accidents.

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TABLE XI.

RELATION TO TRAIN DENSITY OF CASUALTIES TO TRAINMEN ON THE ROAD, ALL TRAIN ACCIDENTS.*

Year.	Total train mileage.		Train density.		Casualties to trainmen. Killed.		Injured.		Total casualties.	
1904....	1,007,529,452		4,826		558		4,135		4,693	
1905....	1,038,441,430	I	4,839	I	533	D	4,210	I	4,743	I
1906....	1,105,877,091	I	5,035	I	612	I	4,769	I	5,381	I
1907....	1,171,922,997	I	5,211	I	707	I	5,540	I	6,247	I
1908....	1,129,149,453	D	4,931	D	453	D	4,138	D	4,591	D
1909....	1,112,452,351	D	4,776	D	352	D	2,989	D	3,341	D
1910....	1,221,852,647	I	5,131	I	479	I	4,123	I	4,602	I
1911....	1,237,500,138	I	5,081	D	428	D	4,048	D	4,476	D
1912....	1,236,758,715	D	4,986	D	407	D	4,367	I	4,774	I
1913....	1,280,931,735	I	5,090	I	369	D	4,072	D	4,441	D
1914....	1,251,791,798	D	4,909	D	296	D	2,721	D	3,017	D

*Accident statistics are from Interstate Commerce Commission Accident Bulletins. Train-mile and train-density statistics are compiled from the Interstate Commerce Commission's annual Statistics of Railways in the United States.

Relation to Train Density of Casualties to Passengers.

The other class of persons who may be expected to be much affected by an increase in train density is that of passengers. The more freight trains there are on the road, the more chances of casualties to passengers from collisions, derailments and other accidents occasioned by a more densely crowded condition of the tracks. In Table XII following, the variations in the number of casualties to passengers in collisions are shown in comparison with the variations in the train density, from 1903 to 1914. In Table XIII the variations in casualties from derailments are compared with the variations in train density.

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TABLE XII.

RELATION TO TRAIN DENSITY OF CASUALTIES TO PASSENGERS, OCCURRING IN COLLISIONS.*

Year.	Total train mileage.	Train density.	Casualties to passengers. Killed.	Injured.	Total casualties.
1903....	982,946,284	4,848	152	3,200	3,352
1904....	1,007,529,452 I	4,826 D	166 I	3,383 I	3,549 I
1905....	1,038,441,430 I	4,839 I	198 I	3,493 I	3,691 I
1906....	1,105,877,091 I	5,035 I	120 D	4,005 I	4,125 I
1907....	1,171,922,997 I	5,211 I	209 I	4,733 I	4,942 I
1908....	1,129,149,453 D	4,931 D	111 D	4,284 D	4,395 D
1909....	1,112,452,351 D	4,776 D	94 D	3,033 D	3,127 D
1910....	1,221,852,647 I	5,131 I	78 D	4,428 I	4,506 I
1911....	1,237,500,138 I	5,081 D	93 I	3,672 D	3,765 D
1912....	1,236,758,715 D	4,986 D	66 D	4,716 I	4,782 I
1913....	1,280,931,735 I	5,090 I	141 I	4,470 D	4,611 D
1914....	1,251,791,798 D	4,909 D	38 D	3,426 D	3,464 D

TABLE XIII.

RELATION TO TRAIN DENSITY OF CASUALTIES TO PASSENGERS, OCCURRING IN DERAILMENTS.*

Year.	Total train mileage.	Train density.	Casualties to passengers. Killed.	Injured.	Total casualties.
1903....	982,946,284	4,848	60	1,645	1,705
1904....	1,007,529,452 I	4,826 D	103 I	1,422 D	1,525 D
1905....	1,038,441,430 I	4,839 I	151 I	2,891 I	3,042 I
1906....	1,105,877,091 I	5,035 I	60 D	2,656 D	2,716 D
1907....	1,171,922,997 I	5,211 I	185 I	4,184 I	4,369 I
1908....	1,129,149,453 D	4,931 D	54 D	3,057 D	3,111 D
1909....	1,112,452,351 D	4,776 D	37 D	2,717 D	2,754 D
1910....	1,221,852,647 I	5,131 I	87 I	2,946 I	3,033 I
1911....	1,237,500,138 I	5,081 D	48 D	2,884 D	2,932 D
1912....	1,236,758,715 D	4,986 D	72 I	4,541 I	4,613 I
1913....	1,280,931,735 I	5,090 I	39 D	4,076 D	4,115 D
1914....	1,251,791,798 D	4,909 D	46 I	3,512 D	3,558 D

*Accident statistics are from Interstate Commerce Commission Accident Bulletins. Train-mile and train-density statistics are compiled from the Interstate Commerce Commission's annual Statistics of Railways in the United States.

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Here, again, the correspondence between casualties and train density, indicated in the foregoing tables and proven by further statistical analysis, is such as to support the claim of railway men that the increase in train density, which would be forced by imposing a restriction on the length of freight trains, will result in more casualties to passengers than would otherwise occur. The proposal to limit train length is thus a menace, not only to those employees who operate trains, but also to the traveling public, and should be considered with full recognition of this fact.

In the case of passengers, as well as of trainmen, the trend of casualties in all train accidents closely follows that of casualties in collisions and derailments. All train accidents include locomotive-boiler explosions and certain other accidents to trains, in addition to collisions and derailments. Table XIV following, gives statistics of casualties to passengers in all train accidents, 1903 to 1914.

TABLE XIV.

RELATION TO TRAIN DENSITY OF CASUALTIES TO PASSENGERS, ALL TRAIN ACCIDENTS.*

Year.	Total train mileage.		Train density.		Casualties to passengers. Killed.		Injured.		Total casualties.	
1903....	982,946,284		4,848		215		4,931		5,146	
1904....	1,007,529,452	I	4,826	D	270	I	4,945	I	5,215	I
1905....	1,038,441,430	I	4,839	I	350	I	6,498	I	6,848	I
1906....	1,105,877,091	I	5,035	I	182	D	6,778	I	6,960	I
1907....	1,171,922,997	I	5,211	I	410	I	9,070	I	9,480	I
1908....	1,129,149,453	D	4,931	D	165	D	7,430	D	7,595	D
1909....	1,112,452,351	D	4,776	D	131	D	5,865	D	5,996	D
1910....	1,221,852,647	I	5,131	I	217	I	7,516	I	7,733	I
1911....	1,237,500,138	I	5,081	D	142	D	6,722	D	6,864	D
1912....	1,236,758,715	D	4,986	D	139	D	9,391	I	9,530	I
1913....	1,280,931,735	I	5,090	I	181	I	8,662	D	8,843	D
1914....	1,251,791,798	D	4,909	D	85	D	7,001	D	7,086	D

*Accident statistics are from Interstate Commerce Commission Accident Bulletins. Train-mile and train-density statistics are compiled from the Interstate Commerce Commission's annual Statistics of Railways in the United States.

Relation to Train Density of Other Casualties.

An increase in train density would, in all probability, tend to increase other classes of casualties than those above considered. Additional trains on the road would tend to augment somewhat the business in terminal yards and railway shops, and thus affect the

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casualties from train accidents that happen to other employees than trainmen on the road. Also, it is quite probable that increased train density would swell the number of casualties sustained in connection with moving trains, but not in collisions, derailments, or other accidents to trains themselves. The more trains there are running, the more occasions there are for casualties to employees in connection with the numerous duties of operating trains, or working about yards, stations or warehouses where trains pass or move about. The more, too, are the occasions for passengers and others to be struck by passing trains in stations, and especially at highway crossings. Such casualties as these result from many other causes and occasions besides train density, so that train density alone is not responsible for a sufficiently large proportion of all such casualties to make the total from all these causes vary in very close agreement with it. However, although it is thus not possible to find, in the data that are available, any statistical support of the conclusion deduced from other than statistical considerations, the conclusion has firm ground in those considerations to sustain it.

Relation to Train Density of the Risk of Accidents and Casualties.

In all of the foregoing statistics train density has been compared only with the total number of the accidents and casualties considered. But the claim of railway men is, not merely that the ***number*** of accidents and casualties will increase with train density, but also that the ***risk*** will increase. That claim is supported by the consideration that occasions or opportunities for accidents and casualties increase ***more than in proportion*** to the increase in number of trains. This argument cannot be given statistical verification, although it would seem a perfectly sound deduction from the facts. The difficulties in the way of statistical verification lie partly in the lack of a satisfactory measure of risk and partly in the concurrent effect of other influences on risk besides that of train density. Yet it cannot be doubted that there is an added risk run by each trainman and each passenger when the number of trains is increased, and ***vice versa.*** That is to say, train-limit legislation, by making train density higher than it would otherwise be, will not only result in accidents to more trains and casualties to more persons than otherwise, but will increase the chances of each train and of each trainman and passenger meeting with disaster.

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Summary of Evidence on the Effect of Train Density Upon Accidents and Casualties.

A consideration of the causes and occasions of accidents and casualties, as related to train density, and an examination of the statistics thereon, thus leave no doubt, it would seem, that the number of collisions and derailments and the number of casualties therefrom to trainmen on the road and to passengers are largely and directly affected by the density of trains upon the railways.

The same consideration of the causes and occasions of accidents and casualties leads directly to a similar conclusion with respect to many of the other train accidents, besides collisions and derailments, and of the casualties therefrom, and to many of the casualties to all employees and passengers, and even other persons, that occur in accidents connected with moving trains, but not train accidents, so called. These all appear to be either directly or indirectly influenced by the density of trains. This conclusion stands, regardless of the fact that the number and concurrent effect on such accidents and casualties of other influences than train density are so great as to prevent the statistics from revealing the relation of such accidents and casualties to train density.

Considering now that it has been shown that a limitation upon the length of freight trains would unavoidably cause an increase in the number of trains, there seems to be adequate basis for the contention that, if the length of freight trains be limited by law, train density will be greater than it otherwise need be. To the extent that train density is greater, it will cause the number of accidents and casualties to be greater than they need be. And not only the number, but also the risk of accident and casualties would be increased.

The Greater Relative Importance of Train Density in the Safety of Railway Operations.

Since that result would follow a limitation of train length, railway men are convinced that the claim of employees concerning the danger of operating long trains becomes of minor importance. For, even if it be conceded that long trains are more hazardous units of

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railway operation than short trains, it appears that the safety of railway operation as a whole is chiefly determined by the much more important factors involved in train density. They contend that, whatever the shortening of trains might conceivably accomplish in reducing the risk of casualty in connection with the operation of the individual train, it would be much more than offset by the increase in risk of collision and other accidents, and of casualties therein, that would result from the increase in the number of trains operated.

It appears from the statistical comparisons presented in the foregoing that there is a close relation between train density and number of casualties to trainmen and to passengers. It is admitted by railway officials that other influences have been exerted in the direction of securing a greater degree of safety in railway operation; but since fluctuations in train density in either direction are ordinarily accompanied by changes in number of casualties, the influence of train density appears to predominate. Train density, under any given conditions, and especially so far as freight trains are concerned, will ordinarily depend upon the number of cars which it is permissible and practicable to operate as a single train. The fewer cars per train there are, the greater the train density and the more numerous in proportion are the accidents.

Decrease in Casualties in Relation to Service Performed by Railways.

There is another aspect of the argument on safety that should be noted if the matter is to be considered in its entirety. The railway business is not unlike many others, on which the public is dependent, in that loss of life and personal injury are unavoidable incidents of the operations by which its service is rendered. Since, therefore, casualties are to be expected, the only question is one of steadily reducing them in proportion to the service performed. Now that is exactly what the railways have been doing, and one of the principal means of doing it has been the use of long train units.

A summary comparison of the increases in railway traffic as a whole over a period of years, and in the numbers of casualties to employees and passengers, is presented in Table XV. The period covered is from 1905 to 1914, inclusive. Since comparisons between individual years may be objectionable on the ground

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of the unrepresentative character of one or both of the years selected, the present study presents annual averages of the data for two periods of five years each—1905 to 1909 and 1910 to 1914, inclusive in each case. The comparison of the data for 1905-1909 with that for 1910-1914 indicates the general tendency of number of casualties in relation to volume of service performed by the railways. The entire period has been especially characterized by increases in the length and capacity of freight trains.

TABLE XV.

SUMMARY OF INCREASES IN RAILWAY TRAFFIC IN RELATION TO NUMBERS OF CASUALTIES.

*Comparison of Averages for Five-year Period 1905 to 1909 with Averages for Period 1910 to 1914, Inclusive.**

	Average per year 1905-1909.	Average per year 1910-1914.	Increase per cent 1905-1909 to 1910-1914.
Freight ton miles.....	215,225,000,000	272,641,000,000	26.7
Freight train miles.....	585,300,000	625,633,000	6.9
Passengers one mile....	26,976,000,000	33,739,000,000	25.1
Passenger train miles..	492,030,000	581,890,000	18.3
Total freight and passenger train miles....	1,077,000,000	1,208,000,000	12.2
Number of employees..	1,502,945	1,725,842	14.8
Mileage of roads.....	226,533	249,388	10.1
Number of employees per 100 miles of line..	663	692	4.4
Number of employees:			
Killed	3,447	3,186	7.6 Dec.
Injured	54,357	55,047	1.3
Number of passengers:			
Killed	469	353	24.7 Dec.
Injured	11,917	15,047	26.3

*Computed from Statistics of Railways in the United States, Interstate Commerce Commission, and from Accident Bulletins for the years included. "Industrial Accidents" are excluded.

The comparisons show that the increases in casualties have been much smaller in proportion than the increases in the volume of railway service rendered, except in the number of passengers injured. In fact, in the last five-year period covered there were absolute decreases in fatalities to both passengers and employees, notwithstanding an increase of about 25 per cent in the average amount of passenger and freight traffic handled and of over 14 per cent in the average number of employes. In view of the sharp reduction

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in number of passengers killed, part of the increase in number injured may reasonably be regarded as due to improved methods of reporting the details of unimportant casualties. The reduction in fatalities leads also to the conclusion that the severity of passenger casualties as a whole has been considerably reduced.

Summary of Evidence on Relation of Train Density to Accidents.

From this examination of the experience of railways over a period of years, there would seem to be no question that the number of collisions and derailments, and the number of casualties to passengers and trainmen in train accidents, all bear a well-marked relation to total train density.

The relation which has been demonstrated to exist between train density and casualties resulting from railway operation appears clearly to be one of cause and effect.

It appears also that notwithstanding progressive increases in volume of business and in number of employees, there has been no corresponding increase in number of casualties incident to railway operation. On the contrary, in recent years there is shown a tendency to decrease in the number of casualties in comparison with the increase in volume of railway business. Because of the increase in length of many trains, the increase in volume of business has not been accompanied by a corresponding increase in accidents and casualties.

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ECONOMIC CONSIDERATIONS INVOLVED IN TRAIN-LIMIT LEGISLATION.

If it could be shown that the operation of long trains entailed increases in casualties, purely economic considerations would be forced to give way to the more important consideration of safety. But it appears from the foregoing discussion of the arguments on safety that the net effect of increase in the length of trains is not to increase the hazards of operation, but so far as is determinable has the opposite tendency. This being the case, it becomes proper and pertinent to point out briefly some economic considerations involved.

Much of Recent Railway Investment Would Be Rendered Valueless.

The tendency of transportation on both water and land always has been toward the use of larger units of operation, the main purpose being to reduce the cost per ton of rendering the service. The development of the large unit in railway operation has involved large investments of capital in forms designed solely to permit the use of larger train units. The productiveness of many of these investments would be nullified by legislation designed to arrest this form of economic advance.

Investment in Roadway and Track.—To enable them to haul longer and heavier trains railway companies have made large investments for the reduction of grades and the elimination of curvature in their main track and for the construction of long passing and yard tracks. The investment for these purposes would be rendered practically valueless by the enactment of legislation that would not permit the operation of long trains, the very purpose for which the investment was made.

Investment in Car Construction and Equipment.—Increased strength of car construction, among other things the substitution of steel for wood as a structural material, has been an essential element in increasing the capacity of the unit of transportation. Improvements in brake systems, couplings, etc., have had the purpose and effect of making the train more nearly a unit, both physically and as to control, than formerly. These features of progress in car construction and equipment have permitted an in-

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crease in the number of cars hauled in a train without correspondingly increased liability to casualties resulting from failure of the car body, or of connections between cars, or of connections between cars and locomotive. Some of the principal advantages derived from the use of steel under-frames and center sills, of improved draft gear, of brake apparatus highly specialized with reference to its required service, and other features of strength in individual parts of equipment, would be greatly reduced and the increased investment in them rendered largely unproductive, if the number of cars handled in single trains should be limited as proposed.

Investment in Larger Locomotives.—The tractive power of locomotives has been greatly increased in order that a longer and heavier train may be hauled by a single locomotive. Such increases in tractive power have been obtained only at an increased cost per locomotive. The additional tractive power of these large locomotives and the additional investment made to secure it would become valueless under the proposed legislation.

Investment in Engine Terminals.—That portion of a railway's investment in roundhouses and in all such facilities as turn-tables, which has been made to adapt them to the accommodation of large locomotives, would be rendered unproductive.

Many Economies in Operating Expenses Would Be Lost.

Limitation of train length would prevent many reductions in operating expenses now being effected by means of large trainloads. In 1890 the average number of tons handled per train in the United States was 175.1. The average revenue of the railways per ton per mile was .941 cents. In some sections of the country it was as high as 1.651 cents. At the average rate per ton per mile and at the average tonnage per train in 1890, the railways received $1.65 per freight train per mile. In 1914 the average number of tons of freight hauled in a train was 451.8. The average revenue per ton per mile was .733 cents. The earnings per freight train per mile at this lower average freight rate were $3.31, or twice as great as they were at the higher average rate charged in 1890. These figures indicate clearly how the increase in the length and capacity of trains has enabled the railways to make greatly reduced rates to the shipper, pay greatly increased wages, and at the same time steadily

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improve their service. Without the increase in the length and capacity of trains, either rates could not have been reduced, or wages could not have been so increased, or the railways would have been compelled to economize at the expense of service or suffer financial ruin.

Additional Investment Would Be Made Necessary.

Legislation limiting the length of freight trains would not only render valueless a great part of recent investments, but would require additional investment on the part of the railways to accommodate their operations to changed conditions.

It would necessitate an increase in the number of locomotives equal to the increased number of trains required to handle a given traffic.

The increased number of locomotives would make necessary remodeling of locomotive terminal facilities in order to provide additional stalls in roundhouses and more track room in yards proportionate to the increase in number of locomotives.

Additional tracks, sidings, switches and signal apparatus would be required in a ratio indicated approximately by the increase in number of trains that would result from limitation of train-length. If traffic were equal in both directions and at all times of the day, and if every train met every other train, meeting points, alone, of trains would increase as the square of the number of trains. Additional passing points, with trains in the same direction, but of different speed, would cause the total of both meeting and passing points to increase in even a greater ratio. And meeting and passing facilities would have to be provided accordingly. Since the actual conditions are not so uniform as that, the increase in the number of meeting and passing points might be more or less than this, but there would be a material increase.

Financial Effects of Train-limit Legislation.

When a bill to limit the length of freight trains to 50 cars was pending in the legislature of Illinois in 1915, data were compiled by 23 roads, having 8,781 of the 12,611 miles of railway in that state, showing the estimated effect that would be produced by such legis-

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lation on their investment and operating expenses. These data, summarized, were as follows:

Investment made valueless:	
a. For grade reduction and heavy rail	$30,631,943
b. For siding and terminal track extensions	6,727,453
c. For heavy motive power	8,075,160
Total	$45,434,556
Increase in operating expenses per year:	
a. Increase in payroll, enginemen and trainmen	$2,266,059
b. Increase in payroll, other employees	976,141
c. Increase in cost of fuel	1,025,480
Total	$4,267,680
New capital required:	
a. For locomotives	$4,007,080
b. For passing and terminal tracks, etc	4,138,850
c. For locomotive terminal facilities	3,955,000
Total	$12,100,930
d. For second, third, and fourth track requirements in ten years	$43,495,360

Reduced to a mileage basis, it appears from this statement that the railways of Illinois placed the amount of investment that would be rendered valueless by a limitation of the length of freight trains to 50 cars, at $5,198 per mile; increase in operating expenses per year, $488 per mile; immediate investment of new capital, $1,384 per mile; amount of new capital the investment of which would be made necessary in 10 years, $4,976 per mile. Whether similar legislation would produce proportionate effects on all the more than 250,000 miles of railway in the United States can only be conjectured.

Effect on Rates Paid by the Public.

Railways have only one source from which to derive the means for paying their fixed charges and operating expenses. This is the revenue received by them from the public for the transportation of passengers and freight. Since legislation limiting the length of trains would increase their fixed charges and operating expenses, it is clear that it would, in the long run, make the passenger and freight rates which they would have to charge the public, and would be legally entitled to charge it, higher than would otherwise be necessary.

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Appendix.

Statistical Proof of the Relation to Train Density of Accidents and Casualties.

The statistical proof that train density has an important effect on the number of accidents and casualties can be briefly indicated.

The comparison with train density of the number of accidents and of casualties, as specified in the text, has been made with full recognition of the fact that other factors, as well as train density, affect the number of accidents and casualties. But, since it is not possible to eliminate these other factors entirely in order to observe the relation between train density alone and accidents and casualties, it has been necessary to compare the general trend of accidents and casualties from all causes and influences with the general trend of the single influence, train density, and make allowance in the conclusions for the probable effect of the other causes.

Most important of these other influences are the human factor and the numerous safety appliances or other improvements in conditions affecting safety, such as second and other additional tracks. As to the human factor, it is reasonable to assume that the "safety-first" movement has made employees somewhat more careful, and hence that accidents and casualties have become somewhat fewer than they would have been otherwise.

As to safety appliances, these have doubtless more and more prevented accidents as the use of such appliances has increased and their improvement has progressed. Moreover, the steady increase in second, third, and other tracks tends to reduce the chances of accident from congestion of the line with trains.

The effect of such cumulative changes in these other factors would be to reduce the total number of accidents and casualties below what it otherwise would have been by reason of the influence of train density. The actual statistics, therefore, would not reflect the effect of train density as closely as if there had been no such changes in these other conditions affecting safety. Hence the dependence of accidents and casualties on train density may be assumed to be even greater than that indicated by the statistics in the form in which they are available.

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The most definite and precise method of detecting whatever relation,—or, more accurately, whatever correlation,—there may be between two series of numbers that appear to vary in agreement with each other, is a mathematical computation which gives a result that measures the degree or extent to which the two series of numbers are correlated. This result is known as the coefficient of correlation. If the two series of numbers are completely correlated, the coefficient of correlation will be 1. If they are not completely dependent, one upon the other, the coefficient of correlation will be a decimal less than 1, its amount being smaller the less the correlation between the two series of numbers. If the two series of numbers vary without any relation whatever to each other, the coefficient of correlation will be 0. Thus the coefficient of correlation is virtually a measure, in percentage, of the dependence of one series of numbers on the other.

In the present case, one of the two series of numbers to be tested is that of the train density, year by year, considered as a condition affecting the number of certain classes of accidents and casualties. The other series of numbers is that of the accidents and casualties, year by year, that are thought to depend in part upon the degree of train density. Now the numbers in this latter series are, as already noted, affected by influences other than, but concurrent with, train density. These other influences may, and doubtless usually do, change their upward and downward tendencies quite independently of the changes in train density. Therefore, the statistics that are available of accidents and casualties, being subject to these other concurrent influences also, show a dependence on train density only to the extent that it is one of the predominant influences. That is to say, the coefficient of correlation for train density and any class of accidents or casualties tends to be lower than it would be if all these other influences should remain unchanged from year to year, and the effect of train density alone on the class of accidents or casualties were thus separately tested.

Therefore, whatever the coefficient of correlation between the available statistics on accidents or casualties and those on train density, it may be assumed to be less than the true measure of the independent effect of changes in train density.

It is commonly held among statisticians that a coefficient of correlation of about .50 indicates a correlation between the statistics

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under comparison sufficient to support a proposition, derived from other reasoning, that one series of statistics depends upon the other. And the higher the coefficient is above .50 the greater the evidential value of the statistics.

On the other hand, a coefficient appreciably less than .50, and especially as low as or lower than .35, is not considered as indicating a sufficient degree of correlation between the two series or groups of statistics to support an argument that either series depends on the other. And if the coefficient is as low as .25, and especially if as low as .10, the statistics cannot be considered as affording any support whatever to a postulated relationship between them. However, this does not mean that a low coefficient of correlation necessarily *disproves* the proposition. That would depend on how nearly each series of statistics represented one factor only in the problem. If either series represented more than one factor, it might well be that the relation could be shown, from other than statistical arguments, to be true for that one factor, and yet the relative weight of that factor be so small that the relation would not be reflected in the statistics.

Turning now to the available statistics on train density, accidents, and casualties, given in the text, the coefficient of correlation found in each case is shown in the following table. To save needless detail of demonstration, only the total casualties, including fatalities and injuries, are represented in this table, although the number of killed and of injured is separately shown in the text.

Coefficients of Correlation with Train Density of the Specified Classes of Accidents and Casualties.

No. of table.	Page.	Item correlated with train density.	Coefficient of Correlation.
VIII.	..	Collisions	.61
VIII.	..	Derailments	.62
IX.	..	Total casualties to trainmen on the road occurring in collisions	.49
X.	..	Total casualties to trainmen on the road occurring in derailments	.66
XI.	..	Total casualties to trainmen on the road occurring in all train accidents	.61
XII.	..	Total casualties to passengers occurring in collisions	.90
XIII.	..	Total casualties to passengers occurring in derailments	.67
XIV.	..	Total casualties to passengers occurring in all train accidents	.79

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BUREAU OF RAILWAY ECONOMICS

Established by Railways of the United States
for the Scientific Study of Transportation Problems

Railway Stockholders

June 30, 1915

Consecutive No. 94
Miscellaneous Series No. 24
WASHINGTON, D. C.
1916

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BULLETINS OF THE
BUREAU OF RAILWAY ECONOMICS

MONTHLY BULLETINS

The monthly summary of Revenues and Expenses of Steam Roads in the United States has been issued regularly since July, 1910.

Following is the list of bulletins for the last twelve months:

Consecutive Number.	Monthly Report Series.	Month of—
78.	59.	April, 1915.
79.	60.	May, 1915.
80.	61.	June, 1915.—Insert with Bulletin—Operating Returns: Fiscal Years Ending June 30, 1914 and 1915.
82.	62.	July, 1915.
84.	63.	August, 1915.
85.	64.	September, 1915.
86.	65.	October, 1915.
87.	66.	November, 1915.
89.	67.	December, 1915.
90.	68.	January, 1916.
91.	69.	February, 1916.
93.	70.	March, 1916.

The following issues are Out of Print:

Consecutive Number.	Monthly Report Series.	Month of—
7.	5.	October, 1910.
9.	7.	December, 1910.
13.	10.	March, 1911.
19.	13.	June, 1911.
22.	15.	August, 1911.
51.	37.	June, 1913.

(Continued to page 3 of cover.)

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Railway Stockholders

June 30, 1915

Bureau of Railway Economics
Washington, D. C.
June, 1916

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RAILWAY STOCKHOLDERS: JUNE 30, 1915.

Introductory.

The statistics presented in this bulletin for 1915 cover the returns of 1,285 railway companies to the Interstate Commerce Commission. These corporations include both railway companies that file operating reports with the Commission and their non-operating subsidiaries.[a] The aggregate operated mileage of these 1,285 railway companies on June 30, 1915, was 257,211 miles. The total number of their stockholders on that date was 626,122.[b]

Under the statistical and accounting regulations of the Interstate Commerce Commission, operating roads comprise three distinct classes. Roads of Class I are those having annual operating revenues above $1,000,000 each; roads of Class II, those with annual operating revenues of from $100,000 to $1,000,000; roads of Class III, those with annual operating revenues below $100,000. The mileage operated on June 30, 1915, by these three classes of roads was respectively as follows:

Class I	228,679
Class II	19,716
Class III	8,816
Total	257,211

The non-operating subsidiaries did not, of course, report any operated mileage. Their owned mileage, which is operated under lease or other agreement by the operating roads, amounted on

[a] Switching and terminal companies are omitted; also a few small roads or roads in receivers' hands for which the desired information regarding stockholders is not reported to the Commission.

[b] The statistics of the present bulletin are not strictly comparable with an earlier compilation of the Bureau of Railway Economics showing railway stockholders on June 30, 1914. The methods of classifying and reporting railway stock changed considerably, beginning with the fiscal year 1915, at the instance of the Interstate Commerce Commission, and the statistics of the years 1914 and 1915 are not on an exactly comparable basis. It is expected in future issues of this bulletin to compare the results of the year 1915 with those of each later year as completed.

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June 30, 1915, to 38,446 miles. This owned mileage is included in the aggregates of operated mileage just shown.

Under Interstate Commerce Commission practice, the United States is divided into three territorial districts—Eastern, Southern, and Western. This territorial arrangement is followed in the present bulletin. The Eastern District comprises the region extending from the Atlantic seaboard north of the Potomac and Ohio rivers to a western boundary constituted of Lake Michigan, a line drawn from Chicago through Peoria to St. Louis, and the Mississippi River from St. Louis to Cairo. The Southern District lies east of the Mississippi and south of the Ohio and Potomac rivers. The Western District comprises the region extending west from Lake Michigan, a line drawn from Chicago through Peoria to St. Louis, and the Mississippi River from St. Louis to the Gulf. A road lying in more than one district is assigned to that district in which lies the larger portion of its mileage, or with which it seems most closely allied in character of business.

The statistics upon which the tables in this bulletin are based are taken from the annual reports on file with the Commission. They show the total number of stockholders of record at the last closing of the stock books on or prior to June 30, 1915. If the stock books have not been closed within a year, the stockholders as of the close of the year are returned.[a] Therefore, while the returns for 1915 do not in all cases refer strictly to the status of the stock books as of the last day of the fiscal year, June 30, yet they are commonly referred to as being the facts on that date, and are so accepted for the purposes of this tabulation.

Number of Stockholders, June 30, 1915.

Table I gives the number of roads included, mileage operated, and total number of stockholders on June 30, 1915. The information is shown according to district, and also for operating and non-operating roads of the three classes already described. Non-operating subsidiary roads are respectively assigned to the class to which their

[a] In the case of half a dozen small roads the information for 1914 was the latest available. Inasmuch as there had been little or no change in the ownership of these roads, it seemed safe to assume that the returns for June 30, 1914, were equally applicable to June 30, 1915. The returns for 1914 were therefore used in the present tabulations.

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operating roads belong. Thus a non-operating road of Class I is so designated because it is subsidiary to an operating road of Class I; similarly, non-operating roads of Class II and Class III are respectively subsidiary to operating roads of the two corresponding classes.

It should be borne in mind that the aggregate number of stockholders reported to the Commission by all roads is the number of distinct holdings of stock and does not necessarily represent the number of separate individual holders or persons. The same individual may and often does hold stock in more than one railway. If he is a stockholder in three railways, he is so reported by each of the three railways and is counted three times in making up the aggregate. In consequence, the number of individual railway stockholders is smaller than the totals here shown. To ascertain how much smaller would require the investigation of the stock books of each individual railway and the expenditure of an enormous amount of time and effort.

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TABLE I.

NUMBER OF STOCKHOLDERS: RAILWAYS OF THE UNITED STATES, JUNE 30, 1915.

District and Class.	Number of roads.	Miles of line operated.	Number of stockholders.
UNITED STATES:			
Operating roads;			
Class I	170	228,679	511,187
Class II	267	19,716	10,604
Class III	405	8,816	17,327
Total operating roads	842	257,211	539,118
Non-operating subsidiaries;			
Class I	410	.....	86,347
Class II	16	.....	180
Class III	17	.....	477
Total non-operating subsidiaries.	443	.....	87,004
Total United States	1,285	257,211	626,122
EASTERN DISTRICT:			
Operating roads;			
Class I	68	58,921	244,288
Class II	88	4,420	4,739
Class III	102	1,780	4,051
Total operating roads	258	65,121	253,078
Non-operating subsidiaries:			
Class I	280	.....	79,005
Class II	6	.....	74
Class III	10	.....	269
Total non-operating subsidiaries.	296	.....	79,348
Total Eastern District	554	65,121	332,426
SOUTHERN DISTRICT:			
Operating roads;			
Class I	33	41,880	48,106
Class II	59	4,890	2,767
Class III	127	2,768	1,959
Total operating roads	219	49,538	52,832
Non-operating subsidiaries:			
Class I	51	.....	4,644
Class II	3	.....	34
Class III	5	.....	196
Total non-operating subsidiaries.	59	.....	4,874
Total Southern District	278	49,538	57,706
WESTERN DISTRICT:			
Operating roads;			
Class I	69	127,878	218,793
Class II	120	10,406	3,098
Class III	176	4,268	11,317
Total operating roads	365	142,552	233,208
Non-operating subsidiaries:			
Class I	79	.....	2,698
Class II	7	.....	72
Class III	2	.....	12
Total non-operating subsidiaries.	88	.....	2,782
Total Western District	453	142,552	235,990

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It will be noted that the total number of stockholders on June 30, 1915, was 626,122, covering 1,285 railway companies, with an operated mileage of 257,211 miles. The 842 operating roads were owned by 539,118 stockholders, while the 443 non-operating roads were owned by 87,004 stockholders. This represents an average of 640 stockholders per railway for operating roads, 196 for non-operating roads, and 487 for all roads.

Of the total number of stockholders, 332,426, or 53.1 per cent, were stockholders in the Eastern railways; 57,706, or 9.2 per cent, were stockholders in the Southern railways; while 235,990, or 37.7 per cent, were stockholders in the Western railways. This indicates nothing as to the residence distribution of the stockholders. Stockholders of Eastern railways may live in the South, the West, or abroad, and similar divergence between residence and ownership may prevail in the South and the West.

Holdings per Stockholder, June 30, 1915.

Table II gives the par value of capital stock outstanding, total number of stockholders, and average amount of stock held per stockholder on June 30, 1915, by districts and by classes.

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TABLE II.

AVERAGE HOLDINGS PER STOCKHOLDER: RAILWAYS OF THE UNITED STATES, JUNE 30, 1915.

District and Class.	Capital stock outstanding. Par value.	Number of stock-holders.	Average amount of stock per stockholder. Par value.
UNITED STATES:			
Operating roads;			
Class I	$6,829,820,715	511,187	$13,361
Class II	372,702,236	10,604	35,147
Class III	111,561,782	17,327	6,439
Total operating roads	7,314,084,733	539,118	13,567
Non-operating subsidiaries;			
Class I	1,318,591,424	86,347	15,271
Class II	3,338,600	180	18,548
Class III	2,272,135	477	4,763
Total non-operating subsidiaries	1,324,202,159	87,004	15,220
Total United States	8,638,286,892	626,122	13,796
EASTERN DISTRICT:			
Operating roads;			
Class I	$2,489,976,817	244,288	$10,193
Class II	129,089,286	4,739	27,240
Class III	26,899,788	4,051	6,640
Total operating roads	2,645,965,891	253,078	10,455
Non-operating subsidiaries;			
Class I	746,769,047	79,005	9,452
Class II	1,149,000	74	15,527
Class III	1,078,250	269	4,008
Total non-operating subsidiaries	748,996,297	79,348	9,439
Total Eastern District	3,394,962,188	332,426	10,213
SOUTHERN DISTRICT:			
Operating roads;			
Class I	$974,391,461	48,106	$20,255
Class II	75,357,750	2,767	27,234
Class III	31,375,314	1,959	16,016
Total operating roads	1,081,124,525	52,832	20,463
Non-operating subsidiaries;			
Class I	71,503,725	4,644	15,397
Class II	247,000	34	7,265
Class III	687,885	196	3,510
Total non-operating subsidiaries	72,438,610	4,874	14,862
Total Southern District	1,153,563,135	57,706	19,990
WESTERN DISTRICT:			
Operating roads;			
Class I	$3,365,452,437	218,793	$15,382
Class II	168,255,200	3,098	54,311
Class III	53,286,680	11,317	4,709
Total operating roads	3,586,994,317	233,208	15,381
Non-operating subsidiaries;			
Class I	500,318,652	2,698	185,441
Class II	1,942,600	72	26,981
Class III	506,000	12	42,167
Total non-operating subsidiaries	502,767,252	2,782	180,722
Total Western District	4,089,761,569	235,990	17,330

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None of the averages in this tabulation showing amount of stock per holder take account of the fact that the same individual is sometimes a stockholder in more than one railway. This point has already been discussed on page 5. It is clear that if there are duplications in the number of stockholders, the average holdings per person must be larger than those of the present table covering average holdings per stockholder.

The average holding per stockholder, par value, was $13,796 on June 30, 1915, for the United States as a whole. In the East the average was $10,213; in the South it was $19,990; in the West it was $17,330.

In all three districts the average holdings for operating railways of Class II were larger than the averages for roads of Class I. In the East the average for Class II was nearly three times as large; in the West, between three and four times as large. These comparatively high averages are due throughout to the relatively small number of stockholders per railway, and this in turn resulted from the fact that a large proportion of railways of Class II are controlled by other railways, usually roads of Class I. Where a road is so controlled, the number of stockholders on its books is seldom greater than the number of directors (each of whom holds one qualifying share of stock) plus one (the controlling railway).

The same situation exists among operating railways of Class III, a large proportion of which are controlled by other railways. However, these roads have a smaller average amount of stock outstanding than operating roads of Class II, and the average holdings are therefore much smaller.

Non-operating subsidiaries are also to a large extent owned or controlled by other railways, which results in a comparatively small number of stockholders on the average. As these subsidiaries are usually small roads, the average holding per stockholder is, for the most part, not large. The only exception to this rule is found in subsidiary roads of Class I in the Western District. The 79 roads in this group show an average holding per stockholder of $185,441. This average, which is out of all proportion to the other groups, is entirely due to the inclusion of several lessor railways with large capital stock, whose ownership vests in each case in a single controlling railway. Thus the Carolina, Arizona & Santa Fe Railway, with capital stock of $50,000,000, is controlled by the Atchison,

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Topeka & Santa Fe Railway, which owns $49,999,500 of the stock, the remaining $500 being distributed among the five directors. Similarly, the Central Pacific Railway, with $84,675,500 of stock, is controlled by the Southern Pacific Company, which owns $84,674,600 of the stock, or all but the directors' qualifying shares. Again, the Mason City & Fort Dodge Railroad, with $32,841,152 of stock, is controlled by the Chicago Great Western Railroad, which owns $32,840,600; while the Southern Pacific Railroad, with $160,000,000 of stock, is controlled by the Southern Pacific Company, which owns or controls $159,998,900.

Clearly, a series of averages that include large holdings of railway stock by other railways do not satisfactorily portray the general distribution of railway capital stock. To ascertain how widely railway stock is distributed, and in what amounts, among the general public, it is necessary to eliminate, as far as possible, the holdings of such stock by the railways themselves. A partial elimination is attempted in the next section—the only elimination that is practicable without detailed investigation of the stock books of every railway in the United States.

Railway Stock in the Hands of the Public.

Beginning with the fiscal year 1915, the Interstate Commerce Commission has required every operating railway of Class I and Class II (but not Class III) and every non-operating railway to report the names and holdings of its twenty largest stockholders. This has now made it possible to attempt a separation of stockholdings in the hands of railway corporations from those in the hands of individuals and to present an average of holdings per stockholder that will correspond roughly with the popular conception of that average.

So far as railway companies, or individual or trust companies holding for the benefit of railway companies, are sufficiently large stockholders in other railways to be included among the twenty largest stockholders, it now becomes possible to separate such stockholders and their holdings from the aggregates of stockholders and of capital stock, and thus to arrive at a figure which will represent only individual stockholders and their holdings. In this way may be ascertained the approximate number of stockholders who are not railway corporations, together with the total amount of their hold-

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ings—that is, stock in the hands of the public. This is done in Table III.

However, the net figure resulting from such a process of separation only approximates accuracy, for the data available for complete analysis and classification are unfortunately lacking. In the first place, operating railways of Class III are not represented in Table III, because, as already stated, they are not required to make returns of their twenty largest stockholders; in the second place, the list of railway corporations that are stockholders in other railways is not complete, nor is the total amount of their holdings ascertainable, because some railways which are holders of the stock of other railways do not hold a sufficient amount to appear among the twenty largest stockholders. However, it is probable that the greater part of the railway holdings is represented in the elimination that has been carried out in Table III.

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TABLE

RAILWAY STOCK IN THE HANDS

(Railways of Class I and Class II, with

District and Class.	Number of stockholders.	Total stock outstanding June 30, 1915. Par value.	Average amount per stockholder. Par value.
UNITED STATES:			
Operating roads;			
Class I	511,187	$6,829,820,715	$13,361
Class II	10,604	372,702,236	35,147
Total	521,791	7,202,522,951	13,803
Non-operating subsidiaries;			
Class I	86,347	1,318,591,424	15,271
Class II	180	3,338,600	18,548
Total	86,527	1,321,930,024	15,278
United States—Class I and II	608,318	8,524,452,975	14,013
EASTERN DISTRICT:			
Operating roads;			
Class I	244,288	$2,489,976,817	$10,193
Class II	4,739	129,089,286	27,240
Total	249,027	2,619,066,103	10,517
Non-operating subsidiaries;			
Class I	79,005	746,769,047	9,452
Class II	74	1,149,000	15,527
Total	79,079	747,918,047	9,458
Eastern District — Class I and II	328,106	3,366,984,150	10,262
SOUTHERN DISTRICT:			
Operating roads;			
Class I	48,106	$974,391,461	$20,255
Class II	2,767	75,357,750	27,234
Total	50,873	1,049,749,211	20,635
Non-operating subsidiaries;			
Class I	4,644	71,503,725	15,397
Class II	34	247,000	7,265
Total	4,678	71,750,725	15,338
Southern District—Class I and II	55,551	1,121,499,936	20,189
WESTERN DISTRICT:			
Operating roads;			
Class I	218,793	$3,365,452,437	$15,382
Class II	3,098	168,255,200	54,311
Total	221,891	3,533,707,637	15,925
Non-operating subsidiaries;			
Class I	2,698	500,318,652	185,441
Class II	72	1,942,600	26,981
Total	2,770	502,261,252	181,322
Western District—Class I and II	224,661	4,035,968,889	17,965

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III.

OF THE PUBLIC, JUNE 30, 1915.

annual operating revenues above $100,000.)

Held by or for railways.		In the hands of the public. (Approximate.)		
Number of railway holders.	Amount of stock held. Par value.	Number of stockholders.	Amount of stock held. Par value.	Average amount per stockholder. Par value.
153	$1,541,786,058	511,034	$5,288,034,657	$10,348
143	108,228,580	10,461	264,473,656	25,282
296	1,650,014,638	521,495	5,552,508,313	10,647
383	868,985,575	85,964	449,605,849	5,230
9	956,600	171	2,382,000	13,930
392	869,942,175	86,135	451,987,849	5,247
688	2,519,956,813	607,630	6,004,496,162	9,882
70	$606,707,850	244,218	$1,883,268,967	$7,711
69	51,494,475	4,670	77,594,811	16,616
139	658,202,325	248,888	1,960,863,778	7,878
266	362,496,650	78,739	384,272,397	4,880
4	744,200	70	404,800	5,783
270	363,240,850	78,809	384,677,197	4,881
409	1,021,443,175	327,697	2,345,540,975	7,158
29	$188,817,400	48,077	$785,574,061	$16,340
24	8,355,500	2,743	67,002,250	24,427
53	197,172,900	50,820	852,576,311	16,776
40	40,981,075	4,604	30,522,650	6,630
1	9,500	33	237,500	7,197
41	40,990,575	4,637	30,760,150	6,634
94	238,163,475	55,457	883,336,461	15,928
54	$746,260,808	218,739	$2,619,191,629	$11,974
50	48,378,605	3,048	119,876,595	39,330
104	794,639,413	221,787	2,739,068,224	12,350
77	465,507,850	2,621	34,810,802	13,281
4	202,900	68	1,739,700	25,584
81	465,710,750	2,689	36,550,502	13,593
185	1,260,350,163	224,476	2,775,618,726	12,365

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The total number of stockholders of roads of Classes I and II and their non-operating subsidiaries on June 30, 1915, was 608,318, while the total amount of outstanding stock of these roads was $8,524,452,975. It will be recalled that these aggregates exclude the returns of operating and non-operating roads of Class III, and therefore are not fully comparable with the aggregates for 1915 presented in Tables I and II. The average holding per stockholder, including railway corporations as stockholders, was $14,013.

Deducting the 688 railways by or for whom the stock of other railways was held, and the $2,519,956,813 of stock so held, there remains a total of $6,004,496,162 of capital stock in the hands of 607,630 stockholders, who comprise what may be termed the general public.[a] This represents an average holding per stockholder for the United States as a whole of $9,882. The average was $7,158 in the East, $15,928 in the South, and $12,365 in the West. These averages are considerably smaller than those of Table II, where gross holdings are shown without deduction for stock in the hands of the railways themselves. This is particularly true of non-operating subsidiaries of Class I in the Western District, where the abnormally high average of $185,441, shown in Table II, becomes $13,281 after large railway holdings have been eliminated.

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[a] Including railways with comparatively small holdings of railway stock and, of course, any corporations or associations other than railways.

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